

**FORM 10-K**

For the fiscal year ended September 30, 2003

For the transition period from                  to

Commission File Number: 0-22175

(Exact name of registrant as specified in its charter)

**New Jersey**  
(State or other jurisdiction of  
incorporation or organization)

**22-2746503**  
(I.R.S. Employer Identification No.)

**145 Belmont Drive, Somerset, NJ 08873**  
(Address of principal executive offices) (zip code)

**(732) 271-9090**  
(Registrant's telephone number, including area code)

## None

## Common Stock, No Par Value

Yes ☒ No ☐

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act).

Yes ☒ No ☐

The aggregate market value of common stock held by non-affiliates of the registrant as of March 31, 2003 was approximately \$45,545,163 (based on the closing sale price of \$1.65 per share).

The number of shares outstanding of the registrant's no par value common stock as of December 12, 2003 was 38,244,800.

**EMCORE Corporation**

## FORM 10-K

**For the fiscal year ended September 30, 2003**

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### Forward-Looking Statements

This Annual Report on Form 10-K includes forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These forward-looking statements are based largely on our current expectations and projections about future events and financial trends affecting the financial condition of our business. These forward looking statements may be identified by the use of words such as "expects", "anticipates", "intends", "plans", "believes", "estimate", "target", "may", "will" and variations of these words and similar expressions. These forward-looking statements are subject to business, economic and other risks and uncertainties, and actual results may differ materially from those discussed in these forward-looking statements. Factors that could contribute to these differences include, but are not limited to, those discussed under "Risk Factors", "Forward-Looking Statements" and elsewhere in this report. The cautionary statements made in this report should be read as being applicable to all forward-looking statements wherever they appear in this report. This discussion should be read in conjunction with the Consolidated Financial Statements, including the related footnotes. These forward-looking statements include, without limitation, any and all statements or implications regarding:

- The ability of EMCORE Corporation (EMCORE) to remain competitive and a leader in its industry and the future growth of EMCORE, the industry and the economy in general;
- difficulties arising from the separation of the TurboDisc business from EMCORE's ongoing business lines;
- difficulties in integrating recent or future acquisitions into EMCORE's operations;
- the expected level and timing of benefits to EMCORE from its restructuring and realignment efforts, including:
  - expected cost reductions and its impact on EMCORE's financial performance,
  - expected improvement to EMCORE's product and technology development programs,
- the belief that restructuring and realignment efforts will position EMCORE better in its current business environment and prepare it for future growth with increasingly competitive new product offerings and improved long-term cost structure; and
- guidance provided by EMCORE regarding its expected financial performance in current or future periods, including, without limitation, with respect to anticipated revenues for any period in fiscal 2004 and subsequent periods.

These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected, including without limitation, the following:

- The disposition of our TurboDisc business may result in decreased revenues going forward as well as additional difficulties arising from the separation of its operations from our ongoing operations; and
- other risks and uncertainties described in EMCORE's filings with the Securities and Exchange Commission (SEC) (including under the heading "Risk Factors" in this Annual Report), such as:
  - cancellations, rescheduling or delays in product shipments;
  - manufacturing capacity constraints;
  - lengthy sales and qualification cycles;
  - difficulties in the production process;
  - changes in semiconductor industry growth;



- increased competition; and
- delays in developing and commercializing new products.

We assume no obligation to update the matters discussed in this Annual Report, except as required by applicable law or regulation.

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## PART I

### Item 1. Business

For specific information about our Company, our products or the markets we serve, please visit our website at <http://www.emcore.com>. The information on EMCORE's web site is not incorporated by reference into and is not made a part of this report. All of our SEC filings are available free of charge on our website.

#### Company Overview

EMCORE Corporation, a New Jersey corporation established in 1984, offers a broad portfolio of compound semiconductor-based components and subsystems for the rapidly expanding broadband and wireless communication markets and the solid-state lighting industry. EMCORE continues to expand its comprehensive product portfolio to enable the transport of voice, data and video over copper, hybrid fiber/coax (HFC), fiber, satellite and wireless communication networks. The company is building upon its leading-edge compound semiconductor materials and device expertise to provide cost-effective components and subsystems for the cable television (CATV), telecommunications, data and storage, satellite and wireless communications markets. EMCORE supports these end markets through its EMCORE Fiber Optics, EMCORE Photovoltaics and EMCORE Electronic Materials and Devices product lines. Through its 49% ownership participation in GELcore, LLC, EMCORE plays a vital role in developing and commercializing next-generation LED technology for use in the general illumination market. Our target markets and main products that support these markets include:

##### CATV

- Optical components and subsystems for cable television (CATV) signal transmission over HFC, including hub transmitters based on linear 1310 nanometer (nm) and 1550 nm Distributed Feedback (DFB) and Fabry-Perot (FP) laser technologies, head-end transmitters based on 1550 nm DFB laser and external modulator technologies, and HFC node video detectors and receivers based on PIN (the "P", "I", "N" represent P-type, intrinsic and N-type semiconductor materials, respectively) photodiode technology.

##### Telecommunications

- Optical components and subsystems for telecommunications and fiber-to-the-premise, business, curb or home (in general, FTTx), including high-speed long-wavelength edge emitting lasers and transmit optical subassemblies (TOSA) based on 1310 nm and 1550 nm DFB or FP technologies, head-end transmitters for FTTx applications based on 1550nm laser technology, passive optical network (PON) receivers for FTTx applications, high speed receivers and detectors based on avalanche photodetectors (APD) and PIN detector technologies, and 4- and 12-channel parallel optical transceiver modules for telecommunication switch applications based on 850 nm vertical cavity surface emitting laser (VCSEL) and PIN photodiode array technology.

##### Data and Storage

- Optical components and subsystems for data communications and storage applications, including high-speed VCSELs and PIN photodiode components, 12-channel parallel optical transceiver modules for High Performance Computing (HPC) or "Super Computing" markets, LX4 and CX4 products for short reach 10 Gigabit per second (Gb/s) data communications and Ethernet networks, and 10 Gb/s TOSA and receive optical subassemblies (ROSA) for storage area networks (SAN).

##### Satellite Communications

- Solar cells and solar panels for global satellite communications, featuring world-leading conversion efficiencies and satellite communication (Satcom) products, including transmitters, receivers, subsystems and systems to transport wideband microwave signals between satellite base stations and antenna dishes.

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##### Wireless Communications

- Electronic materials for the wireless handset and base station markets, which materials include 4-inch and 6-inch InGaP Hetero-junction Bipolar Transistor (HBT) and AlGaAs pseudomorphic high electron mobility transistors (pHEMT) and E-mode epi wafers that are used for power amplifiers and switches in GSM, TDMA and CDMA multiband wireless handsets.

##### Solid-State Lighting

- High Brightness Light Emitting Diodes (HB-LEDs) for lighting applications. Through its 49% ownership participation in GELcore, LLC (GELcore), EMCORE plays a vital role in developing and commercializing next-generation LED technology for use in the general illumination market. GELcore's products include traffic lights, channel letters, flashlights and other signage and display products incorporating HB-LEDs. In the near term, GELcore expects to be deploying its HB-LED products in the automotive and general appliance markets.

##### Acquisitions and Divestitures

Over the past twelve months, EMCORE has refocused its market and product strategy to address high growth opportunities for its compound semiconductor based components and subsystems in the CATV, telecom, data and storage, satellite and wireless communications markets. In addition to developing its internal capability to develop and manufacture products for these markets, EMCORE has expanded its portfolio of communications products and technologies through a series of strategic acquisitions:

- In December 2002, EMCORE acquired certain assets of privately held Alvesta Corporation (Alvesta) of Sunnyvale, California for \$250,000 in cash. The transaction included the acquisition of intellectual property and inventory including several Alvesta product designers. Alvesta, which operates under EMCORE's fiber optics group, was an industry leader in the research and development of parallel optic



transceivers for fiber optic communication networks. Alvesta pioneered four channel parallel optic transceivers for the Optical Internetworking Forum and 10 Gigabit (10G) Fibre Channel, Ethernet and Infiniband applications. The newly formed design center in Santa Clara, CA designs low-cost parallel optical module solutions used in Fibre Channel, Ethernet and Infiniband networks. The new products include media converter modules, copper XENPAK transceivers and active optical cables to address the short reach requirements of central offices and data centers. These components form the optical subsystem of the recently announced SmartLink product.

- In January 2003, EMCORE purchased Agere Systems, Inc.'s CATV transmission systems, telecom access and Satcom components business, formerly Ortel Corporation (Ortel), for \$26.2 million in cash. This business, now operating as the Ortel division within EMCORE's fiber optics group, designs and manufactures high performance optoelectronic solutions that enable voice, video and data networks. Ortel's product offerings include 1310 nm and 1550 nm analog and digital lasers, dense wavelength division multiplexing (DWDM) lasers, transmitter engines, photodiodes, FTTx components, wideband lasers and receivers, and optical links for long-haul antenna remoting. These products will enable EMCORE to have a broad presence in the CATV and Radio Frequency (RF) transport markets as well as the telecom access and emerging FTTx market.
- On October 9, 2003, EMCORE announced that it had acquired Molex Inc.'s 10G Ethernet transceiver business (Molex) for an initial \$1.0 million in cash and an additional \$1.5 million in progress payments expected to be paid during fiscal 2004. This transaction included assets, products and intellectual property including several Molex product designers. Management believes that Molex, which operates under EMCORE's fiber optics group, gives EMCORE a significant competitive advantage and the most complete 10G Ethernet transceiver product portfolio in the industry. Molex specializes in coarse-wavelength-division-multiplexing (CWDM) products. The newly formed design center in Downers Grove, IL designs and manufactures serial 10 Gb/s and CWDM optical transceivers for the growing 10G Ethernet market.
- On November 3, 2003, EMCORE sold its TurboDisc systems business to a subsidiary of Veeco Instruments Inc. (Veeco) in a transaction that could be valued at up to \$80.0 million. The purchase

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price was \$60.0 million in cash at closing with an additional aggregate maximum payout of \$20.0 million over the next two years. EMCORE will receive in cash 50% of all revenues from this business that exceed \$40.0 million in each of the next two years, beginning January 1, 2004. Revenues for the systems business in fiscal 2003 were approximately \$52.7 million, down from a peak of \$131.1 million in fiscal 2001. This transaction included the assets, products, product warranty liabilities, hardware-related technology and intellectual property used primarily in the operation of this business, including its facilities located in Somerset, New Jersey. Approximately 150 employees of EMCORE were involved in the TurboDisc business of which approximately 120 became employees of Veeco.

Management believes that the sale of the TurboDisc systems business was a critical step in reorienting EMCORE's market and product focus. The capital equipment business enabled the Company to develop the critical materials science expertise that has become the cornerstone of its compound semiconductor based communications products and our sole business focus. EMCORE retained a license to all systems related intellectual property and ownership of all its process and device technology. Moreover, the sale of TurboDisc business strengthened EMCORE's balance sheet and helped provide the resources necessary to implement its communications strategy.

As a result of these transactions, the focus of the discussion in this Annual Report will be on our compound semiconductor-based components and subsystems for the broadband and wireless communication markets and the solid-state lighting industry, rather than on our systems segment. Although the systems segment did represent a significant portion of our business and results of operations in fiscal 2003, results from operations in fiscal 2004 will be classified as "discontinued operations" and no impact thereafter. Accordingly, we believe that emphasizing our continuing businesses in the compound semiconductor related components and subsystems products will be more meaningful for investors.

#### Compound Semiconductor Industry Overview

Recent advances in information technologies have created a growing need for efficient and high-performance electronic systems that operate at very high frequencies, require higher transmission rates, require increased storage capacity, have augmented computational and display capabilities and can be produced cost-effectively in commercial volumes. In the past, manufacturers of electronic systems have relied on advances in silicon semiconductor technology to meet many of these demands; however, the new generation of high-performance electronic and optoelectronic applications require certain functions that are generally not achievable using silicon-based components. Advantages of compound semiconductor devices over traditional silicon devices include:

- **Higher operating speeds** to address 10 Gigabit per second (Gbps) and beyond applications;
- **Lower power consumption** to meet the demand for higher bandwidth density;
- **Reduced noise and distortion** for maximum signal to noise performance;
- **Higher temperature performance** for both commercial and military applications;
- **Light emitting and detecting** optoelectronic properties to power the optical interconnection market;
- **Higher detection efficiency** to maximize conversion power in solar power applications; and
- **Higher light emission efficiency** for converting electrical power in general and specialty lighting applications.

Compound semiconductor devices can also be combined into integrated circuits, such as transmitters, receivers and alphanumeric displays. Electronics manufacturers are increasingly integrating compound semiconductor devices into their products to achieve higher performance in applications targeted for a wide variety of communication markets. Examples of such applications enabled by compound semiconductor devices include:

- **High speed internet** built upon optical devices that transport data over long distances;
- **Video-on-demand** over high-speed cable modems using high efficiency lasers and low-noise receivers;



- **Storage Area Networks** for the high speed transfer of data between computer systems and storage elements and among storage elements;
- **Satellite communication** powered by high efficiency solar cells;
- **LED street lights** and car tail lights built upon high-brightness LEDs;
- **Cellular telephones** and **wireless networks** built upon power efficient RF devices; and
- **DVD players** built upon short wavelength optical devices to maximize storage density.

The systems that enable these applications consist of many component and subsystems that incorporate individual compound semiconductor devices. Companies that own unique leading-edge technologies will be able to continue to provide value-added components, subsystems and turnkey systems to meet the communication requirements of the future.

The diagram below shows the individual building blocks that enable the final user application. The trend in the industry is for companies to supply more and more of the entire pyramid in order to stay cost competitive and improve operating margins. EMCORE focuses its products in the materials, components and subsystems layers.

#### Consumer

**Applications:** Internet, CATV, Telephony, FTTx, Satcom, Wi-Fi networks, Storage

**Systems:** modems, cellphones, routers/switches, satellites, lighting

**SubSystems:** subassemblies, modules, transmitters/receivers, solar panels

**Components:** VCSELs, DFB lasers, PIN detectors, RF devices, solar cells, LEDs

**Compound Semiconductor Materials:** Gallium Arsenide, Indium Phosphide, Gallium Nitride

### EMCORE's Strategy

EMCORE's objective is to maximize shareholder value by building upon its leading-edge compound semiconductor materials and device expertise to provide cost-effective components and subsystems for the CATV, telecom, data and storage, satellite and wireless communications markets. EMCORE's products enable the transport of voice, data and video over copper, HFC, fiber, satellite and wireless communication products. The key elements of EMCORE's strategy include:

#### I. Leverage EMCORE's Core Compound Semiconductor and Manufacturing Expertise Across Multiple Product Applications.

The model of purchasing components from multiple vendors results in too many layers of margin stack-ups such that the final integrated subsystem is no longer cost competitive. We believe the trend in the component and subsystem industry is towards a vertically integrated structure in which key technologies are produced internally. By having the know-how and intellectual property to internally produce and supply compound semiconductor products, component and subsystem companies can stay ahead of the competition in both performance and cost effectiveness.

EMCORE continually leverages its proprietary core technology to develop compound semiconductor products for multiple applications in a variety of markets. Building upon the compound semiconductor materials expertise into components and subsystems products is a key focus of EMCORE's ongoing strategy. Our internally designed and manufactured VCSELs, digital DFB lasers, PIN and APD photodiodes are the optical components in our TOSA and ROSA products as well as our data and telecommunications receivers, transceivers and transponders. Similarly, our internally designed and manufactured analog DFB and FP lasers and PIN photodiodes are the optical components in our CATV transmitters, receivers and FTTx transceivers.

#### II. Target Potential High Growth Market Opportunities.

EMCORE's strategy is to target potential high growth market opportunities where performance characteristics and high volume production efficiencies can give compound semiconductors a competitive advantage over other devices. Historically, while technologically superior, compound semiconductors have not been widely deployed because they are more expensive to manufacture than silicon-based semiconductors and other existing solutions. EMCORE believes that as compound semiconductor production costs are reduced, new customers will be compelled to use these products because of their higher performance characteristics. For example, EMCORE focuses its efforts in high-growth areas in communication infrastructure by providing complete solutions based on widely accepted platforms such as Synchronous Optical Network (SONET), Asynchronous Transfer Mode (ATM) and Gigabit Ethernet.

With the increased demand for high bandwidth services such as Internet, video-on-demand, on-line gaming and high definition television (HDTV), more and more systems are relying on optics to transport the signals. EMCORE is uniquely positioned to leverage its compound semiconductor expertise in the area of VCSELs, DFB lasers, PIN/APD detectors into value-added subsystems that meet the market demand.

Consistent with our strategy of pursuing market opportunities in which management believes that future growth will be strong, we evaluated our TurboDisc systems division and noted that the market for MOCVD reactors had become saturated in recent years with tremendous price competition on every new system sale. Accordingly, we sold the TurboDisc division as described above. We did, however, retain significant intellectual property rights in the TurboDisc technology and obtained favorable terms for future purchases of TurboDisc systems and related components.

#### III. Pursue Strategic Acquisitions and Partnerships with Industry Leading Companies.

EMCORE seeks to identify and develop long-term relationships with leading companies in each of the industries it serves. EMCORE develops these relationships in a number of ways that include long-term, high-volume supply agreements, joint ventures, acquisitions and other arrangements. In January 1999, General Electric Lighting and EMCORE formed GELcore, a joint venture to develop and market HB-LED lighting products. Since its inception, GELcore has had a compound annual growth rate (CAGR) of 23% with annual revenue approaching \$55 million. General Electric Lighting and EMCORE have agreed that this joint venture will be the exclusive vehicle for each party's participation in solid-state lighting. Recently, acquisitions have been a focus in order to enhance technologies. Over the past two years, the acquisitions listed below have expanded not only our materials expertise, but also our components and subsystem technologies:



- Tecstar's solar panel technology to leverage our solar cell expertise;
- Alvesta's low-cost pluggable optical and electrical module technology to leverage our VCSEL and PIN expertise;
- Ortel's high-performance head-end transmitters and subscriber-end receivers to leverage our DFB laser, APD detector and analog RF expertise; and
- Molex's industry leading CWDM optical modules to leverage our multi-wavelength DFB laser and PIN detector expertise.

EMCORE is currently considering additional strategic acquisitions to acquire new technologies and products to broaden our market penetration in the communications sector.

**IV. Continually Invest in Research and Development to Maintain Technology Leadership.**

Through substantial investment in research and development, EMCORE seeks to expand its leadership position in compound semiconductor based communications products and subsystems. EMCORE works with its customers to enhance the performance of its processes, materials science and fiber optic module design expertise, including the development of new low-cost, high-volume wafers, components and subsystems for its customers. In order to remain a leader in our market segments, EMCORE not only addresses our customers' current needs, but we also work with them regarding their evolving requirements to remain designed into their product lifecycle. In addition, EMCORE's

development efforts are focused on continually lowering the production costs of its products. For example, EMCORE recently released the latest version of its high-efficiency advanced triple junction solar cells, which now incorporates a monolithic integrated diode, a technology which is a more cost effective and robust solution for satellite integrators.

**V. Target Positive Cash Flows From Operations.**

Management is committed to reducing EMCORE's cost structure by lowering the breakeven points for each of its product lines. In fiscal 2002, EMCORE proceeded with a restructuring program, consisting of the realignment of all engineering, manufacturing and sales/marketing operations, as well as workforce reductions. Management believes that these cost reductions saved EMCORE at least \$5.0 million per quarter in fiscal 2003. EMCORE also essentially eliminated all outside contractors and significantly reduced overall expenditures for materials, software and capital assets. As part of the ongoing effort to cut costs, EMCORE also implemented a program to focus research and development efforts on projects that can be expected to generate returns within one year. As a result, EMCORE has been able to reduce overall research and development costs without, we believe, jeopardizing future revenue opportunities. To improve gross margins in fiscal 2004, product lines will be transferred to contract manufacturers for high volume production and management will implement additional programs to improve manufacturing process yields.

**EMCORE's Products**













The following chart summarizes (i) our products, (ii) the markets to which those products are directed, (iii) applications in which our products are used, and (iv) certain benefits and characteristics of compound semiconductor devices:


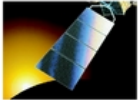
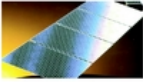


Products	Market	Representative Applications	Benefits/Characteristics
DFB, FP Lasers Photodetector Head-end transmitters Analog video receivers	CATV	Cable Television (CATV) Hybrid Fiber Coax networks Within Customer Premise Equipment (CPE)	Increased network capacity Increased data transmission speeds Increased bandwidth Lower power consumption Low noise video receive Increased transmission distance
VCSEL components DFB and FP Lasers and optical receivers RF materials Photodiode Optical transceivers VSR transponders Passive optical network (PON) transceivers	Telecommunications	High capacity fiber optic lines Long reach and metro networks Fiber to the premise (FTTx) Very Short Reach (VSR) links including OC-768, OC-192, OC-48. SONET and SDH networks.	Increased data transmission speeds Increased optical launched power to enable longer distance reach Lower power consumption Higher bandwidth density
VCSEL components DFB, FP Lasers Photodetector RF devices & materials VSR Transponders XENPAK, X2, XFP transceivers Parallel optical modules	Data and Storage	High-speed fiber optic networks and optical links (including Infiniband, Ethernet, Fibre Channel networks). Copper replacement or extention products in the data center Supercomputing High performance computing (HPC) systems Storage Area Networks (SAN) Network Attached Storage (NAS)	Increased network capacity Increased data transmission speeds Increased bandwidth Lower power consumption Improved cable management over copper interconnects Increased transmission distance Lowest cost optical interconnections for massively parallel muti-processors
Solar cells and panels	Satellite	Power modules for satellites	Radiation tolerance



RF materials SATCOM subsystems	<b>communications</b>	Satellite to ground Communication	Conversion of more light to power than silicon Reduced launch costs Increased bandwidth
RF and electronic materials RF and electronic devices Optical transmitters for remoting	<b>Wireless communications</b>	Cellular telephones Pagers PCS handsets Direct broadcast systems PDAs Remoting	Increased network capacity Lower power consumption Reduced network congestion Extended battery life Improved signal to noise performance
HB-LEDs Miniature lamps	<b>Solid-State Lighting</b>	Flat panel displays Solid state lighting Outdoor signage and displays Traffic signal	Lower power consumption Lower temperature operation Longer life

The following chart depicts some of our products as well as the application in which our customers use them.

Fiber Optic Products: 10Gig Ethernet, CATV, FTTx, Lasers, Detectors, SATCOM		
<b>LX4 XENPAK</b> 	<b>Parallel Optical Modules</b> 	<b>CX4 XENPAK</b> 
<b>Cooled CATV Transmitter Card</b> 	<b>Un-cooled Coaxial CATV Lasers, Receivers</b> 	<b>Universal Laser Card</b> 
<b>ONT PON Transceivers</b> 	<b>Video Receivers</b> 	<b>Bi-Directional Modules</b> 
<b>2, 4, 10 Gbps TOSAs</b> 	<b>2, 4, 10 Gbps ROSAs</b> 	<b>Surface Mount 10G Lasers, Receivers</b> 
<b>DFB, FP Lasers</b> 	<b>VCSEL Singlets, Arrays</b> 	<b>PIN, APD Detectors</b> 
<b>Transmitters, Receivers</b> 	<b>Subsystems</b> 	<b>Systems</b> 

PhotoVtaic Products: Solar Cell Arrays, CICs, Solar Panels		
<b>Cell Arrays</b> 	<b>Solar Panels</b> 	<b>CICs</b> 
Electronic Materials and Devices Products: Epi Wafers, InGaP HBTs, GaN		
<b>Epi Wafers for Wireless, RF Applications</b> 	<b>InGaP HBTs</b> 	<b>GaN Diodes</b> 

EMCORE's Product Lines

Fiber Optics

Over the past several years, communication networks have experienced dramatic growth in data transmission traffic due to worldwide Internet access, e-mail and e-commerce. As Internet content expands to include full motion video on demand (including high definition television or HDTV), multi-channel high quality audio, online video conferencing, image transfer, online gaming and other broadband applications, the delivery of such data will place a greater demand on available bandwidth. The bulk of this traffic is already routed through the optical networking infrastructure used by local and long distance carriers as well as Internet service providers. Optical fiber offers substantially greater bandwidth capacity, is less error prone and is easier to administer than copper wire.



EMCORE's fiber optics group manufactures high-speed optical transmitter modules, receiver modules and transponders utilizing EMCORE's leading-edge VCSEL and PIN photodiode array components for the data communications and telecommunications markets. EMCORE's modules, designed to help solve the data bottle necking problems for distances under 300 meters in central office and point-of-presence environments, provide a cost effective alternative to more costly comparable serial interconnects and are targeted to replace bulky copper cabling solutions. Growing markets that will benefit from these cost-effective short reach products include the 10G Ethernet and HPC or "Super Computing" markets. As summarized in the table below, EMCORE has positioned itself as a component and subsystem manufacture that services a significant portion of the digital and analog communications market. Our main products include short wavelength (850 nm) VCSELs, long wavelength (1310 nm and 1550 nm) DFB and FP lasers, PIN and APD photodetectors and optical subsystems that include transmitters, receivers, transceivers and transponders.

Digital (DataCom & Telecom)					Analog (BroadBand)
Short Wave		Long Wave			
Serial	Parallel	Long Reach	Short Reach		
Xponder					
TxRx					
OSA					
Chip					
Existing Products     Existing Capability					

Short Wavelength (850nm) VCSELs

EMCORE designs, develops and manufactures high-speed VCSELs and PIN photodiode components and subassemblies for the data communications and telecommunications markets. EMCORE offers a complete product line of VCSEL and PIN photodiode solutions, including bare die, packaged components and optical subassemblies for integration into Gigabit Ethernet, Fibre Channel, Infiniband, WDM, ATM systems, and high-speed telecom applications, including VSR OC-192 and high speed optical backplanes.

VCSELs are revolutionary compound semiconductor micro laser diodes that emit light vertically from the surface of a fabricated wafer. They combine the ability of batch process and on-wafer tests like LEDs and the superior electro-optical performance of traditional edge-emitting lasers. In addition, the cylindrical laser beam profile allows an easy and efficient coupling of the light into a multi-mode fiber. The manufacturability for both wafer processing and packaging enables a cost-effective high-bandwidth fiber optic communication solution.

VCSELs have many advantages, including ultra-high modulation rates for advanced information processing, extremely low power consumption, high fiber optic coupling efficiencies, circular output beams and photolithography-defined geometries. EMCORE's strategy is to capitalize on its oxide VCSEL manufacturing platform and expertise, by providing the industry with 1 Gb/s, 2.5 Gb/s, 10 Gb/s (OC-192), and 40 Gb/s (OC-768) solutions through single-channel serial, multi-channel parallel or WDM approaches. Our customers combine VCSEL technology with custom integrated circuits (IC) and system level designs for the final transceiver package. This package usually consists of a VCSEL, detector, a laser driver and various other electronic components all connected via a printed circuit board. This board is environmentally sealed, protected, and configured into the final transceiver product. Leading electronic systems manufacturers are integrating VCSELs into a broad array of end-market applications including Internet access, digital cross-connect telecommunications switches, Infiniband optical bus, fiber optic switching and routing, such as Gigabit Ethernet and storage area networks (SAN).

Long Wavelength (1310 nm and 1550 nm) DFB and FP Lasers

Recently, cable operators and traditional telephone service providers have been competing with each other to offer the lowest price for unlimited "triple play" (voice, data and video) communications through one cable. As Multi-System Cable Operators (MSOs) offer "triple play" services over CATV systems, Regional Bell Operating Companies (RBOCs) have responded by offering "triple play" services from the deployment of new FTTx systems.

EMCORE's newly acquired Ortel division designs, develops and manufactures high-speed, long-wavelength edge emitters based on DFB or FP technologies. These lasers are used for longer reach applications in the 2km, 10km, and 40+km distances. These devices are packaged into subsystems and used to transmit CATV or FTTx signals in the forward path from the central office to the subscriber and in the return path back to the central office.

The advantage of the longer wavelength (i.e., 1310 nm, 1490 nm and 1550 nm) and narrow spectral width (in the case of the DFB laser) is the reduced absorption and dispersion in the optical fiber. This results in increased distances between repeaters or amplifiers and saves the service providers in cost of deployment.

Through its Ortel division, EMCORE also manufactures and sells a line of fiber optic Satcom transmitters, subsystems and systems to transport wideband microwave signals between satellite base stations and antenna dishes.

Photodetectors (PIN and APD)

Photodetectors are discrete semiconductor devices that detect light in order to convert an optical signal into an electrical signal. Similar to VCSELs, photodetectors combine the ability of batch processing and on-wafer testing with superior electro-optical performance. The large aperture size readily permits efficient coupling of light from a multi-mode fiber.



EMCORE has successfully developed 850 nm, 1310 nm and 1550 nm photodetectors to cover all speed and distance applications. In addition, 1x4 and 1x12 arrays of 850 nm photodetectors can be incorporated into EMCORE's optical transceiver subsystems. The addition of photodetector products completes our line of optical devices such that EMCORE can supply all internally produced optical devices to our subsystems products that include packaged components, transmitters, receivers, transceivers and transponders.

*Optical Subsystems (Transmitters, Receivers, Transceivers and Transponders)*

EMCORE's optical subsystems products are built using our internally produced optical devices. By adding more value beyond our optical devices, we can improve margins as well as overall revenue. Many of these subsystem products are defined through multi-source agreements (MSAs) that specify form, fit and function to guarantee wide availability and interoperability between vendors. EMCORE's strategy is to leverage our optical device expertise in order to provide the most cost-effective subsystems in key markets that do not necessarily compete with our optical device customers.

These subsystems are becoming quite intelligent with functions that retime and clean up the transmitted and received signals that pass through them. Many of these subsystems have been widely adopted in Ethernet, SONET, and Fibre Channel equipment. The most widely available is the XENPAK form factor (for more information see [www.xenpak.org](http://www.xenpak.org)). In 2003, EMCORE has developed, both internally and through the Molex acquisition, several value added subsystems in the XENPAK form factor. These include the LX4 and CX4 products for short reach 10 Gb/s data communications.

EMCORE's subsystem product strategy is to differentiate through technology and cost effectiveness by leveraging our compound semiconductor expertise and the growing know-how in subsystem design and manufacturing. EMCORE's family of subsystem products, built upon our optical device expertise, includes:

- Head-end transmitters for CATV and FTTx applications based on 1550 nm laser technology;
- Subscriber-end video receivers for CATV and FTTx applications based on 1310 nm and 1550 nm PIN detectors and video receive technology;

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- XENPAK transponders using CWDM and copper CX4 technology for the 10G Ethernet market;
  - 4- and 12-channel parallel optical transceiver modules for HPC or "Super Computing" markets and telecommunication switch applications based on 850 nm VCSEL and PIN array technology; and
  - 10G transmit and receive optical subassemblies for storage area networks.

**Photovoltaics**

The world-wide satellite industry has seen substantial improvement in 2003, with awards to build new satellites increasing from five in 2002 to 17 thus far in 2003. In addition, the industry has seen consolidation into more financially stable institutions. As a result, we are seeing progress toward the satellite industry developing into a communications backbone for video, voice and data.

EMCORE serves the global communications market by providing advanced solar cell products and solar panels for application in the space industry. Compound semiconductor solar cells are used to power satellites because they are more resistant to radiation levels in space and convert substantially more power from light, therefore weighing less per unit of power than silicon-based solar cells. These characteristics increase satellite useful life, increase payload capacity and reduce launch costs.

A solar cell works as follows: the "photovoltaic effect" is the basic physical process through which a solar cell converts sunlight into electricity. Sunlight is composed of photons, or particles of solar energy. These photons contain various amounts of energy corresponding to the different wavelengths of the solar spectrum. When photons strike a solar cell, they may be reflected or absorbed, or they may pass right through the cell. Only the absorbed photons generate electricity. When this happens, the energy of the photon is transformed into an electric current. Special electrical properties of the solar cell provide the voltage needed to drive the current through an external load (such as a solar array for a spacecraft).

EMCORE designs and manufactures multi-junction compound semiconductor solar cells for commercial satellite applications in its facility in Albuquerque, New Mexico. This facility includes an automated manufacturing system that monitors production processes, uses electronic run cards and provides real-time production rates and yields for process engineering. EMCORE currently manufactures the most efficient and most reliable commercially available radiation resistant solar cell in the world, using an advanced triple-junction cell design and with an average beginning of life efficiency of 27.5%. Satellite success and corresponding revenue depend on power efficiency and the satellite's capacity to transmit data.

In March 2002, EMCORE acquired Tecstar, which provides covered interconnect solar cells (CICs) and solar panel lay-down services. This acquisition augments EMCORE's capability to penetrate the satellite communications market by providing EMCORE with the capacity to manufacture complete solar panels using EMCORE's solar cells, thereby enabling us to provide satellite manufacturers with proven integrated satellite power solutions that considerably improve satellite economics. Satellite manufacturers and solar array integrators can now rely on EMCORE as a single supply source that meets all of their satellite power needs with proven flight heritage. Furthermore, EMCORE obtained significant patents in this acquisition that will enable EMCORE to significantly improve the engineering and design of solar cell products. EMCORE will continue Tecstar's impressive flight heritage and solar component manufacturing expertise, which dates back to 1958 when the Vanguard satellite with Tecstar solar cells was launched. Tecstar's solar panel technology has flown on numerous successful satellite missions, including Lockheed Martin's Chinastar, Loral's Telstar satellite and Orbital Sciences' ORBCOMM Constellation. EMCORE is currently completing the process of qualifying its advanced solar cells with Tecstar's proven solar panel processes for Low Earth Orbits (LEO) and Geosynchronous Earth Orbits (GEO). To date, EMCORE has completed GEO Qualification for SS/Loral in support of the MT Sat-1R and we have completed LEO Qualification for Astrium in support of the CRYOSAT and for ABLE Engineering for the UltraFlex Array. The combination of Tecstar's demonstrated success with well-known space programs and EMCORE's solar cell technology should enable EMCORE to dramatically improve satellite economics. Through well-established partnerships with major satellite manufacturers and a proven qualification process, EMCORE believes it can play a vital role in the evolution of telecommunications and data communications around the world.



Recent Highlights:

- EchoStar VIII was successfully launched in August 2002. EchoStar VIII is the first high-power GEO satellite in orbit powered by EMCORE high-efficiency solar cells.
- EchoStar IX also was successfully launched in September 2003 and is the second high-power GEO satellite in orbit powered by EMCORE high efficiency solar cells.

EMCORE has recently begun active research and development in terrestrial solar cell applications. EMCORE is conducting a National Renewable Energy Laboratory funded effort to adapt our triple junction solar cell technology for the terrestrial photovoltaic market. Due to a higher device cost when compared to silicon solar cells, we are working with solar concentrator systems to lower the cost per watt generated by our multi-junction solar cells. Major terrestrial solar power manufacturers have expressed interest in incorporating EMCORE's terrestrial solar cell technology into their commercial products.

Electronic Materials and Devices

Electronic Materials

RF materials are compound semiconductor materials used in wireless communications. Compound semiconductor RF materials have a broader bandwidth and superior performance at higher frequencies than silicon-based materials. EMCORE currently produces 4-inch and 6-inch InGaP HBT and AlGaAs pHEMT materials including E-mode devices that are used for power amplifiers in GSM, TDMA and CDMA multiband wireless handsets. InGaP HBT materials provide higher linearity, higher power added efficiency as well as greater reliability than first generation AlGaAs HBT technologies. In addition, recent developments and transfers to production of enhancement mode pHEMT technologies have demonstrated their continued competitiveness for handset applications. EMCORE believes that its ability to produce high volumes of RF materials at a low cost will encourage their adoption in new applications and products.

EMCORE's Somerset, New Jersey manufacturing facility has seven TurboDisc MOCVD production systems, one GaN production system and two GaN Discovery systems dedicated to electronic materials production. EMCORE also equipped its wafer fabrication area with state of the art cassette to cassette characterization equipment.

Electronic Devices

MR sensors are compound semiconductor devices that possess sensing capabilities. MR sensors improve vehicle performance through more accurate control of engine and crank shaft timing, which allows for improved spark plug efficiency and reduced emissions. EMCORE sells MR sensors using technology licensed from General Motors.

HB-LED Joint Venture

HB-LEDs are solid-state compound semiconductor devices that emit light and are used in miniature packages in everyday applications such as indicator lights on automobiles, computers and other electronic equipment. HB-LEDs offer substantial advantages over small incandescent bulbs, including longer life, lower maintenance costs and energy consumption and smaller space requirements. Groups of HB-LEDs can make up single or full-color electronic displays. Presently, HB-LED chips are used for backlighting in applications such as wireless handsets, computer monitors and automotive dashboard lighting. In addition, they are used in consumer products and office equipment as indicator lighting, in full color displays, message advertising and informational signs, landscape lighting and traffic signals. By passing blue HB-LED light through certain conversion materials such as phosphors, or by using blue in combination with HB-LEDs of other appropriate colors, white light emission can be obtained.

HB-LEDs have the potential to significantly reduce overall U.S. lighting energy consumption. Energy savings to date from HB-LEDs have been estimated to exceed the power produced from one large electric power plant — more than 8 billion kilowatt-hours. If solid-state lighting achieves anticipated price and performance targets, over the next two decades U.S. lighting energy consumption could be reduced by over 30 percent. HB-LED traffic signals use only 10 percent of the electricity consumed by the

incandescent lamps they replace. Moreover, LED signals last several times longer, allowing for additional savings through reduced maintenance costs. HB-LEDs have also made inroads into mobile applications such as brake and signal lights on trucks, buses and automobiles. In 2002, an estimated 41 million gallons of gasoline and 142 million gallons of diesel fuel were saved because of HB-LED use on these vehicles. If our nation's entire fleet of automobiles, trucks and buses were converted to HB-LED lighting, an estimated 1.4 billion gallons of gasoline and 1.1 billion gallons of diesel fuel could have been saved. The information in this paragraph is based on published reports prepared by Navigant Consulting for the US Department of Energy.

As mentioned above, in January 1999, EMCORE and General Electric Lighting formed GELcore, a joint venture to develop and market HB-LED lighting products. Under the terms of the joint venture agreement, EMCORE has a 49% non-controlling interest in the joint venture. Both parties have agreed that this joint venture will be the exclusive vehicle for each party's participation in solid-state lighting. GELcore combines EMCORE's materials science and device design expertise with General Electric Lighting's brand name recognition, phosphor technology and extensive marketing and distribution capabilities. GELcore's current product line includes traffic lights, channel letters, flashlights and other signage and display products incorporating HB-LEDs. In the near term, GELcore expects to be deploying its HB-LED products in the automotive and general appliance markets. GELcore's long-term goal is to develop products to replace traditional lighting. In September 2000, GELcore acquired Ecolux, Inc., adding HB-LED signaling products to its growing line of LED products. EMCORE believes that Ecolux is currently receiving the majority of contracts for which it submits bids for the replacement of traditional traffic lights with HB-LEDs.

TurboDisc Systems Segment

As mentioned above, on November 3, 2003, EMCORE sold its TurboDisc systems business to Veeco. Revenues for the systems segment were derived primarily from sales of TurboDisc systems, as well as spare parts, services and related products. The sale of the TurboDisc business will allow management to focus on its communications-related product lines, including its CATV, telecommunications, data and storage, wireless, and photovoltaic products as well as the GELcore joint venture with GE concentrating on HB-LED technology.

Revenues by Product Line and Financial Results by Segment

The table below sets forth the revenues and percentage of total revenues attributable to each of EMCORE's product lines for each of the past three fiscal years.

(in thousands)

Product Revenue	FY 2003	% of revenue	FY 2002	% of revenue	FY 2001	% of revenue
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Systems-related	\$ 52,681	46.6%	\$35,878	40.9%	\$131,141	71.0%
Components and subsystems related:						
Photovoltaics	18,196	16.1%	23,621	26.9%	20,206	10.9%
Fiber Optics	32,658	28.9%	9,077	10.3%	13,606	7.4%
Electronic Materials and Devices	9,571	8.4%	19,196	21.9%	19,661	10.7%
Total revenues	\$113,106	100.0%	\$87,772	100.0%	\$184,614	100.0%

See Items 7 and 8, beginning on page 35, for information on EMCORE's financial results by segment.

### Government Research Contract Funding

EMCORE derives a portion of its revenue from funding of research contracts with the U.S. Government (Government). These contracts typically cover work performed from over several months up to several years. These contracts may be modified or terminated at the convenience of the Government and therefore, these programs may be subject to Government budgetary fluctuations. Government contracts generally provide that we may elect to retain title to inventions made in the course of research with the Government obtaining a non-exclusive license to practice such inventions for Government purposes. In fiscal 2003, 2002, and 2001, Government research contract funding represented 5%, 4% and 1% of total EMCORE revenue, respectively.

In June 2002, EMCORE signed a contract with Defense Advanced Research Projects Agency (DARPA) under which it will participate in the Department of Defense agency's mission to develop wide bandgap semiconductor-based high power, high frequency electronics for use in military applications based on EMCORE's GaN technology. The contract consists of a \$3.0 million baseline project to be completed over an 18-month period and \$1.0 million of additional work to be performed at the Government's option over a subsequent 10-month period. The Government has not yet exercised this option. EMCORE will recognize revenue to the extent of costs incurred plus the estimated gross profit as stipulated within the contract, based upon contract performance. EMCORE intends to use the technology developed in this and other Government contracts to commercialize products based on its wide-bandgap materials technology.

### Customers

EMCORE works closely with its customers to design and develop process technology and material science expertise for use in production systems for its customers' end-use applications. EMCORE has leveraged its process and materials science knowledge base to manufacture a broad range of compound semiconductor wafers and devices. EMCORE's customer base includes many of the largest semiconductor, telecommunications, consumer goods and computer manufacturing companies in the world. In fiscal 2003, revenues from Cree, Inc., associated with our systems segment, represented 11.5% of our total revenue. No other customer accounted for over 10% of EMCORE's revenue.

EMCORE has generated a significant portion of its revenue from sales to customers outside the United States. The following chart contains a breakdown of EMCORE's consolidated revenues by geographic region:

Region	For the fiscal years ended September 30,					
	2003		2002		2001	
	Revenue	% of revenue	Revenue	% of revenue	Revenue	% of revenue
	<i>(in thousands)</i>					
United States	\$ 64,189	56.8%	\$58,844	67.0%	\$ 96,551	52.3%
Asia	34,132	30.2%	15,268	17.4%	76,848	41.6%
Europe	14,785	13.0%	13,660	15.6%	11,215	6.1%
TOTAL	<u>\$113,106</u>	<u>100%</u>	<u>\$87,772</u>	<u>100%</u>	<u>\$184,614</u>	<u>100%</u>

In fiscal 2002, sales to Asia and North America declined dramatically because of a large decrease in capital spending by our customers and a consequent decrease in demand for our MOCVD systems. Sales to the United States include sales to Canada, which have not, historically, been material.

### Marketing and Sales

EMCORE actively markets its products through its dedicated sales force, external sales agents, marketing staff, applications engineers, select advertising and participation at trade shows. Our customers work directly with our internal sales force, external sales agents and senior management. EMCORE's strategy is to use its dedicated sales force for marketing and selling to key accounts. EMCORE has plans to expand its external sales agents for increased coverage outside the U.S. and for specific product lines, such as Satcom, in the U.S.

To market and sell certain products in Japan and China, EMCORE relies on Hakuto Co., Ltd. Hakuto has marketed and serviced EMCORE's products since 1988 via six branch offices and owns approximately 4% of EMCORE's common stock. Until he retired in 2002, Shigeo Takayama, the President of Hakuto had also been a member of EMCORE's Board of Directors since 1997.

EMCORE uses Indus Corporation to market photovoltaic products in India, UR Group to market Optical products in Europe, BUPT and MilliTech as sales agent in China for CATV, optical components and Satcom products. EMCORE has an established distribution and value added reseller channel to sell its Satcom products worldwide.

In addition to EMCORE's five manufacturing facilities, it also maintains one domestic sales office located in Santa Clara, California.

While there are common technologies used by each product line, the customers and market segments are much more diverse. Each product line has a marketing and sales organization that can focus completely on the customer needs, the service required both before and after the order is received, as well as on the competitive threats each product and market segment faces. EMCORE's sales cycle for component and subsystem products is usually three months to in excess of a year, during which time EMCORE works closely with its customers to qualify its products in its customers' product lines. Accordingly, EMCORE is able to develop strategic, and therefore long lasting, customer relationships with products and services that are uniquely tailored to our customers' requirements.



Backlog

As of September 30, 2003, EMCORE had a backlog (not including our systems-segment backlog of \$18.4 million) believed to be firm of approximately \$33.1 million. This compares to a backlog of \$19.3 million (exclusive of systems-segment backlog) as reported at the end of the prior year. Half of the increase in backlog was attributable to the Ortel acquisition. Historically, significant portions of our components and subsystems revenue have not been reported in backlog since our customers have reduced lead times. Many of our components and subsystems sales usually occur within the same month when the purchase order is received. The backlog does not include orders for products that have not met qualification specifications. We believe the entire backlog could be filled during fiscal 2004, however, especially given the current market environment, customers may delay shipment of certain orders. Backlog also could be adversely affected if customers unexpectedly cancel purchase orders accepted by us.

Manufacturing

EMCORE's operations include wafer fabrication, design and device production, solar panel engineering and assembly and fiber optic module design and manufacture. Many of EMCORE's manufacturing operations are computer monitored or controlled to enhance reliability and yield. EMCORE employs a strategy of minimizing ongoing capital investments while maximizing the variable nature of its cost structure. EMCORE maintains a commercially advantageous contract supply agreement with Veeco for MOCVD systems, components and spare parts. Where EMCORE can gain significant cost advantages while maintaining strict quality and intellectual property control, EMCORE outsources to Contract Manufacturers (CMs) the production of certain components and sub-assemblies. EMCORE's contract manufacturing supply chain is an integral part of enabling this strategy. EMCORE develops assembly and testing procedures and transfers these procedures to the CMs. The CMs must maintain quality and delivery systems as comprehensive as EMCORE and are continuously monitored for compliance. As of September 30, 2003, EMCORE had 447 employees involved in manufacturing. The location of and products manufactured at EMCORE's facilities are summarized below:

Location	EMCORE product line
Somerset, New Jersey (headquarters)	• Electronic materials and devices (HBTs, pHEMTs and MR sensors)
Albuquerque, New Mexico	• Photovoltaics (solar cells) • Fiber optics (VCSELs and fiber optic modules)
City of Industry, California	• Photovoltaics (CICs and solar panels)
Alhambra, California	• Fiber Optics (CATV/ FTTx, Lasers, Modules and Subsystems)
Downers Grove, Illinois	• Fiber Optics (10G Ethernet Fiber Optical Components)

EMCORE has combined clean room area totaling approximately 60,000 square feet. Unlike silicon semiconductor technology, which could involve up to a 100-step manufacturing process, our electronic materials and devices products are manufactured in a four-part process: epitaxial deposition, fabrication, testing and packaging. The epitaxial deposition process represents the growth of thin layers of GaAs, GaN or other materials on a polished wafer, depending on the nature of the device under production. Following epitaxy, chips are fabricated in a clean room environment. The final steps involve testing and packaging prior to shipment to the customer or further integration into a module or subsystem within EMCORE's manufacturing infrastructure. The module and subsystem assembly and test processes within EMCORE's manufacturing infrastructure involves the design and implementation of production processes as well as the transfer of some of these processes to CMs. EMCORE maintains an internal capability to transfer and monitor the ongoing processes at all CMs.

The manufacturing process also involves extensive quality assurance systems and performance testing. All of EMCORE's facilities have acquired and maintain certification status for their quality management systems. The New Jersey facility, which is used by EMCORE's Electronic Materials and Devices group, is registered to ISO 9001+ QS 9000-1998. Both the New Mexico and California facilities, which are used by EMCORE's Photovoltaics and Fiber Optics groups, are registered to ISO 9001.

Sources of Raw Materials

Outside contractors and vendors are used to supply raw materials and standard components and to assemble portions of end subsystems, components and modules from EMCORE specifications. In certain cases, EMCORE depends on sole, or a limited number of, vendors of components and raw materials; however, EMCORE is continually reviewing efforts to mitigate risks. We generally do not carry significant inventories of any raw materials. EMCORE maintains inventories it believes are sufficient to meet its near term needs. Because we often do not account for a significant part of our vendors' business, we may not have access to sufficient capacity from these vendors in periods of high demand. EMCORE maintains ongoing communications with its vendors to try to ensure against interruptions in supply and has, to date, generally been able to obtain sufficient supplies in a timely manner. EMCORE implemented a vendor program to inspect quality and review suppliers and prices in order to standardize purchasing efficiencies and design requirements in order to maintain as low a cost of sales as possible. If we were to change any of our limited or sole source vendors, we could be required to re-qualify the new vendor. Re-qualification could prevent or delay product shipments that could negatively affect our results of operations. In addition, our reliance on these vendors may negatively affect our production if the components vary in quality or quantity. If we are unable to obtain timely deliveries of sufficient components of acceptable quality, or if the prices of components for which we do not have alternative sources increase, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

Research and Development

The scope of EMCORE's business is in the areas of semiconductor processes and communication components and subsystems. EMCORE's research and development efforts have been sharply focused to maintain the technology leading position of various product lines and to grow into new product areas by leveraging the existing technology base and infrastructure.



The semiconductor industry is characterized by rapid changes in process technologies with increasing levels of functional integration. To maintain and improve its competitive position, EMCORE invests significant resources in research and development. Our efforts are focused on designing new proprietary processes and products, improving the performance of our existing materials, devices and modules, and reducing costs in the product manufacturing process. EMCORE has dedicated 23 MOCVD systems and five device fabrication facilities for both research and production that are capable of processing virtually all compound semiconductor materials and devices. Nine of those MOCVD systems and three device fabrication areas are dedicated fully to research and development efforts and are used by a staff of over 100 scientists, engineers, technicians and staff, 46 of which have a Ph.D. degree. The research and development staff utilizes x-ray, optical and electrical characterization equipment as well as device and module fabrication and testing that generates data rapidly, allowing for shortened development cycles and rapid customer response.

During fiscal years 2003, 2002 and 2001, EMCORE invested \$22.2 million, \$41.0 million and \$53.4 million towards our product research and development activities. As part of the ongoing effort to cut costs, EMCORE implemented a program to focus research and development efforts on projects that can be expected to generate returns within one year. As a result, EMCORE has been able to reduce overall research and development costs without, we believe, jeopardizing future revenue opportunities. EMCORE believes that several research and development projects have the potential to greatly improve its competitive position and to drive its revenue growth in the next few years. Listed below are several examples:

- EMCORE is currently designing new products for the high-performance optical communications market. In fiber optics, EMCORE is the leader in the development of high-speed VCSELs. 10G VCSEL chips and packages have been successfully developed and released to production. These high-speed VCSELs can be produced as singlets or as arrays for higher bandwidth transceivers. Along with its VCSEL efforts, EMCORE has developed 850 nm and 1310 nm photodetector arrays, which operate at speeds of up to 10 Gb/s and are designed to work with both VCSELs and DFB or FP laser devices.
- EMCORE has invested aggressively in the development of array transceiver and WDM products that capitalize on its VCSEL, DFB laser, FP laser and photodetector components. By manufacturing these components in-house, EMCORE is able to reduce the overall cost of the transceiver module. Through its acquisition of Alvesta, EMCORE has added specific know-how and intellectual property in the area of low-cost, short-reach, 10G optical and electrical modules for the enterprise and data center. Products in development are targeted to replace the costly and bulky copper interconnect solutions at 10G and above.
- Through its acquisition of Ortel, EMCORE has entered a new sector of the optical communication market which includes CATV, FTTx and Satcom applications. Ortel brings a broad product base along with new products in development that extends the reach and reduces the cost of deployment of bandwidth on demand. Ortel's key compound semiconductor products include: 1310nm and 1550nm DFB lasers, 1310nm FP lasers, InGaAs PIN photodetectors, APDs and analog RF video receive technologies. These devices are available as packaged components or integrated within subsystems that include entire transmitter and receiver capabilities for head-end or subscriber-end applications. Cost reduction activities through design improvements and off-shore manufacturing will enable the Ortel division to continue to meet the growing demand for CATV and FTTx subsystems.
- Through its acquisition of Molex, EMCORE can now offer an expanded portfolio of products that address the growing 10G Ethernet market. Specific technologies brought in through Molex include: CWDM, pluggable transponder design and high-speed serial optical transceiver design. These added products will enable EMCORE to offer the lowest-cost solutions for the central office and data center. By leveraging the 850 nm VCSEL technology and the 1310 nm DFB technologies internally available to EMCORE, these new pluggable 10G Ethernet products will be able to meet the performance and cost targets of the growing enterprise networking market.
- Regarding photovoltaics, EMCORE has the lead in the satellite industry for high efficiency cells with routine shipments averaging 27.5%. In pre-production, many cells averaging greater than 28.5% have

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been demonstrated. EMCORE believes that terrestrial compound solar cells used in concentrator systems could have potential to be a significant product for EMCORE. Using government research funding, EMCORE has demonstrated solar cells that function in a solar concentrator system at over 1000 suns.

- For electronic materials, EMCORE has continued to develop advanced HBTs and p-HEMTs using AlGaAs and InGaP structures, working with key customers. Our customers are suppliers of power amplifiers for wireless handsets.
- EMCORE has also been developing newer structures for electronic materials using GaN and AlGaN. These GaN FET devices have both military and commercial applications. EMCORE has government research contracts with DARPA for developing GaN epitaxy on SiC for high power RF applications, and with the Air Force for scaling reactor and growth processes to large area production. Leveraging advanced reactor design and process development, EMCORE has achieved excellent material results, with devices showing uniformity (<2%) and yields (>90%) similar to the more established GaAs production lines. Working with both industrial and university collaborators, including Rockwell Scientific, Northrop Grumman, TriQuint, Cornell University and the University of Illinois; EMCORE has demonstrated record power densities at 18GHz (6.7W/mm) and 40GHz (2.8W/mm). These government research programs are expected to continue for the next year with wafer volumes increasing as device development advances. In addition, EMCORE has significantly expanded commercial production of GaN HEMT epitaxial wafers on substrates up to 100mm in diameter. These materials have been well received in the marketplace, and commercial sales are expected to continue to grow over the next year.

EMCORE also competes for research and development funds. In view of the high cost of development, EMCORE solicits research contracts that provide opportunities to enhance its core technology base and promote the commercialization of targeted EMCORE products. Internal research and development funding is used for product development for products to be released within 12 months and external funding is used for longer range research and development.

#### Intellectual Property and Licensing

EMCORE's success and competitive position in its product lines depends significantly on its ability to obtain intellectual property protection for its research and development efforts. EMCORE's strategy is to rely on both patents and trade secrets to protect its intellectual property. A patent is the grant of a property right, which allows its holder to exclude others from, among other things, selling the subject invention in, or importing such invention into, the jurisdiction that granted the patent. In the United States, patents expire twenty years from the



date of application. Through recent acquisitions, EMCORE has enriched its patent portfolio significantly. After giving effect to the transfer of system-related patents (19 patents) to Veeco, EMCORE has 22 U.S. patents and four foreign patents, and others are either pending (99 patent applications filed) or under in-house review (20 disclosures and draft patent applications). Included in these amounts are patents and patent applications acquired from Ortel in January 2003. In addition, through the Ortel acquisition, EMCORE obtained a royalty free license to approximately 5,700 patents and patent applications in the Agere Corporation portfolio, many of which originate with ATT Bell Laboratories.

The U.S. patents will expire between 2009 and 2022. These patents and patent applications claim material aspects of current or planned commercial versions of EMCORE's wafers, devices and modules. In addition, EMCORE actively markets and licenses its intellectual property. Some recently issued patents and filed patent applications include:

- U.S. Patent No. 6,583,902 granted on June 24, 2003 entitled "Modular Fiber Optic Transceiver" covers designs of parallel fiber optical modules. EMCORE purchased this patent through the Alvesta acquisition.
- U.S. Patent No. 6,404,125 granted on June 11, 2002 entitled "Method and Apparatus for Performing Wavelength Conversion Using Phosphors with Light Emitting Diodes" covers methods for creating white light from a single color LED, such as a blue or UV light source.

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- U.S. Patent No. 6,600,100 granted on July 29, 2003 entitled "Solar Cell Having an Integral Monolithically Grown Bypass Diode" is another patent that has been added to our blocking patent portfolio for a product that is likely to become the majority of our solar cell business.

EMCORE relies on trade secrets to protect its intellectual property when it believes publishing patents would make it easier for others to reverse engineer EMCORE's proprietary processes. A "trade secret" is information that has value to the extent it is not generally known, not readily ascertainable by others through legitimate means and protected in a way that maintains its secrecy. Reliance on trade secrets is only an effective business practice insofar as trade secrets remain undisclosed and a proprietary product or process is not reverse engineered or independently developed. In order to protect its trade secrets, EMCORE takes certain measures to ensure their secrecy, such as partitioning the non-essential flow of information between its different groups and executing non-disclosure agreements with its employees, joint venture partners, customers and suppliers.

As is typical in our industry, we have, from time to time, received, and may continue to receive in the future, letters from third parties, asserting patent rights or other intellectual property rights against certain of our products and processes. None of the claims to date has resulted in the commencement of any litigation against us. From time to time, EMCORE licenses from third parties, technology and patent rights to manufacture and sell its products. For example, EMCORE is a licensee of certain VCSEL technology and associated patent rights owned by Sandia Corporation. The Sandia license grants EMCORE:

- non-exclusive rights to develop, manufacture and sell products containing Sandia VCSEL technologies under five U.S. patents that expire between 2007 and 2015; and
- non-exclusive rights to employ a proprietary oxidation fabrication method in the manufacture of VCSEL products under a sixth U.S. patent that expires in 2014. EMCORE's success and competitive position as a producer of VCSEL products depends on the continuation of its rights under the Sandia license, the scope and duration of those rights and the ability of Sandia to protect its proprietary interests in the underlying technology and patents.

In connection with the sale of TurboDisc, EMCORE retained a license to all system-related technology. EMCORE intends to use the license to further optimize the performance of its own reactors and develop improvements to its hardware that will increase yields on existing products and enable the fabrication of advanced, wide bandgap materials.

**Environmental Regulations**

EMCORE is subject to federal, state and local laws and regulations concerning the use, storage, handling, generation, treatment, emission, release, discharge and disposal of certain materials used in its research and development and production operations, as well as laws and regulations concerning environmental remediation and employee health and safety. The production of wafers and devices involves the use of certain hazardous raw materials, including, but not limited to, ammonia, phosphine and arsine. EMCORE has in-house professionals to address compliance with applicable environmental and health and safety laws and regulations.

If EMCORE's control systems are unsuccessful in preventing release of these or other hazardous materials, EMCORE could experience a substantial interruption of operations and could be subject to significant liability for clean-up and other claims. EMCORE believes that it is currently in compliance with all applicable environmental laws, including the Resource Conservation and Recovery Act, except such violations as could not reasonably be expected to have a material effect on the financial condition or results of operations of EMCORE.

**Competition**

The semiconductor industry is intensely competitive and is characterized by rapid technological change, price erosion and substantial foreign competition. EMCORE faces actual and potential competition from a number of established domestic and international compound semiconductor companies. Many of these companies have greater engineering, manufacturing, marketing and financial resources than we have.

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*CATV*

Competitors in the CATV market include JDS Uniphase, Mitsubishi, Hitachi and Fujitsu.

*Telecommunications*

For telecommunications and FTTx components, the market competitors include JDS Uniphase, MRV Communications, Fujitsu, Mitsubishi, and Sumitomo. For 10G transceivers and parallel optical modules, the competitors include Agilent Technologies, Infineon Technologies AG, Picolight and Opnext.

*Data and Storage*

EMCORE's principal competitor for VCSEL devices and components is Honeywell, Inc. There are also numerous smaller VCSEL vendors located throughout the world. For 10G LX4 and CX4 products, the primary competitor is Opnext.



#### *Satellite Communications*

For photovoltaics products, EMCORE primarily competes with Boeing-Spectrolab, Sharp Electronics, RWE Solar and Mitsubishi Electric. For Satcom products the primary competitors are Foxcomm and Miteq.

#### *Wireless Communication*

The primary competitors for EMCORE's Electronic Materials Wireless Communication products include Kopin Corporation, Visual Photonics Epitaxy Co., Ltd., and IQE.

#### *Solid State Lighting*

The principal competitors for HB-LEDs and EMCORE's joint venture with General Electric Lighting include LumiLeds Lighting, a joint venture between Agilent Technologies and Philips Lighting, Siemens AG's Osram GmbH subsidiary, Nichia Corporation and Toyoda Gosei Co., Ltd. In addition, Epistar, Arima, UEC and other Asian based companies in recent years have begun production of LEDs.

In addition to the above, EMCORE competes with many research institutions and universities for research contract funding. EMCORE also sells its products to current competitors and companies with the capability of becoming competitors. As the markets for EMCORE's products grow, new competitors are likely to emerge and present competitors may increase their market share. Furthermore, in the EU, political and legal requirements encourage the purchase of EU-produced goods, which can put EMCORE at a competitive disadvantage as against European competitors.

There are substantial barriers to entry by new competitors across EMCORE's product lines. These barriers include: the large number of existing patents, time and costs to be incurred to develop products, technical difficulty in manufacturing semiconductor products, lengthy sales and qualification cycles, and difficulties in hiring and retaining skilled employees with the required scientific and technical backgrounds. EMCORE believes that the primary competitive factors in the markets in which EMCORE's products compete are yield, throughput, performance, breadth of product line, product heritage, customer satisfaction, and customer commitment to competing technologies. Competitors may develop enhancements to or future generations of competitive products that offer superior price and performance factors. EMCORE believes that in order to remain competitive, it must invest significant financial resources in developing new product features and enhancements and in maintaining customer satisfaction worldwide.

#### **Investments**

In addition to the GELcore joint venture, in February 2002, EMCORE purchased \$1.0 million of preferred stock of Archcom Technology, Inc., a venture-funded, start-up optical networking components company that designs, manufactures, and markets a series of high performance lasers and photodiodes for datacom and telecom industries. EMCORE does not exercise significant influence over financial and operating policies, and the investment represents less than 20% of ownership. Therefore, EMCORE accounts for this investment under the cost method of accounting.

#### **Employees**

At September 30, 2003, EMCORE had 749 employees, including 447 employees in manufacturing operations, 105 employees in research and development, 183 employees in sales, general and administration and 14 temporary employees. This represented an increase of 191 employees or 34% from

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September 30, 2002. This increase was a direct result of the Ortel acquisition. At December 1, 2003, as a result of our sale of TurboDisc business, EMCORE had 621 employees. Our ability to attract and retain qualified personnel is essential to our continued success. None of EMCORE's employees are covered by a collective bargaining agreement, nor have we ever experienced any labor-related work stoppage. We believe that our employee relations are good.

#### **Risk Factors**

YOU SHOULD CAREFULLY CONSIDER THE RISKS DESCRIBED BELOW. IF ANY OF THE FOLLOWING RISKS ACTUALLY OCCURS, OUR BUSINESS, FINANCIAL CONDITION OR RESULTS OF OPERATIONS COULD BE MATERIALLY AND ADVERSELY AFFECTED. WE CAUTION THE READER THAT THESE RISK FACTORS MAY NOT BE EXHAUSTIVE. WE OPERATE IN A CONTINUALLY CHANGING BUSINESS ENVIRONMENT, AND NEW RISK FACTORS EMERGE FROM TIME TO TIME. WE CANNOT PREDICT SUCH NEW RISK FACTORS, AND WE CANNOT ASSESS THE EFFECT, IF ANY, OF SUCH NEW RISK FACTORS ON OUR BUSINESSES OR THE EXTENT TO WHICH ANY FACTOR, OR COMBINATION OF FACTORS, MAY CAUSE ACTUAL RESULTS TO DIFFER MATERIALLY FROM THOSE PROJECTED IN ANY FORWARD-LOOKING STATEMENTS CONTAINED IN THIS REPORT. ACCORDINGLY, FORWARD-LOOKING STATEMENTS SHOULD NOT BE RELIED UPON AS A PREDICTION OF ACTUAL RESULTS. IN ADDITION, OUR MANAGEMENT'S ESTIMATES OF FUTURE OPERATING RESULTS ARE BASED ON THE CURRENT COMPLEMENT OF BUSINESSES, WHICH IS CONSTANTLY SUBJECT TO CHANGE AS MANAGEMENT IMPLEMENTS ITS FIX, SELL OR GROW STRATEGY.

#### *We May Continue To Incur Operating Losses.*

We started operations in 1984 and as of September 30, 2003, we had an accumulated deficit of \$289.4 million. We incurred net losses of \$38.5 million in fiscal 2003, \$129.8 million in fiscal 2002 and \$12.3 million in fiscal 2001. While we have reduced our cost structure substantially, we may continue to lose money. Many of our expenses, particularly those relating to capital equipment, debt service and manufacturing overhead are fixed. Accordingly, lower revenue causes our fixed production costs to be allocated across reduced production volumes, which adversely affects our gross margin and profitability. Therefore, we expect to continue to incur operating losses until revenues significantly increase. We cannot currently predict whether or when demand will strengthen across our product lines or how quickly our customers will consume their inventories of our products.

#### *We May Be Unable to Replace the Revenues From Our Capital Equipment Business.*

On November 3, 2003, EMCORE sold its TurboDisc systems business to Veeco. In fiscal 2003, systems segment sales contributed \$52.7 million in revenues, approximately 46.5% of EMCORE's total revenues. If sales from our component and subsystem product lines do not increase to replace those lost revenues, we will not be able to absorb our fixed costs, invest in new technologies or implement our strategy.

#### *Our Cost Reduction Programs May Be Insufficient To Achieve Long-Term Profitability.*

We are undertaking cost reduction measures intended to reduce our expense structure at both the cost of goods sold and the operating expense levels. We believe these measures are a necessary response to, among other things, declining average sales prices across our product lines. These measures may be unsuccessful in creating profit margins sufficient to sustain our current operating structure and business.



*Reduced Customer Lead Times Means We Are Less Able To Forecast Revenues And, As A Result, May Be Unable To Accurately Predict Growth And Manage Our Cost Structure.*

Several of our customers have reduced the lead times they give us when ordering product from us. While this trend has enabled us to reduce inventory, it also restricts our ability to forecast revenues. If our sales and profit margins do not increase to support the higher levels of operating expenses and if our new product offerings are not successful, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

*We Have Substantial Debt Which We May Be Unable To Repay If We Cannot Generate Sufficient Funds To Do So Or Restructure The Terms Of The Debt.*

In May 2001, we sold \$175.0 million of convertible subordinated notes due in 2006 in a private placement for resale to qualified institutional buyers. Approximately, \$161.8 million of these notes is currently outstanding. We also have approximately \$0.7 million of guarantee obligations in respect of the GELcore joint venture. In addition, we may incur additional debt in the future. This significant amount of debt could, among other things:

- make it difficult for us to make payments on the notes and any other debt we may have;
- make it difficult for us to obtain any necessary future financing for working capital, capital expenditures, debt service requirements or other purposes;
- require us to dedicate a substantial portion of our cash flow from operations to service our debt, which would reduce the amount of our cash flow available for other purposes, including working capital and capital expenditures;
- limit our flexibility in planning for, or reacting to, changes in our business; and
- make us more vulnerable in the event of a further or continued downturn in our business.

If our cash flow is inadequate to meet our obligations or we are unable to generate sufficient cash flow or otherwise obtain funds necessary to make required payments on the notes or our other obligations, we would be in default under the terms thereof. Default under the note indenture would permit the holders of the notes to accelerate the maturity of the notes and could cause defaults under future indebtedness we may incur. Any such default would have a material adverse effect on our business, prospects, financial condition, results of operations and cash flows. In addition, we cannot assure you that we would be able to repay amounts due in respect of the notes if payment of the notes were to be accelerated following the occurrence of an event of default as defined in the note indenture.

Depending on market and other considerations, we may seek to restructure our debt by extending the maturity and/or reducing principal amount of our subordinated notes. In order to accomplish this, we may be required to issue significant amounts of common stock and substantially reduce the price at which the notes are convertible into our common stock. As a result, our current shareholders could suffer significant dilution, and our share price could be negatively affected.

*Our Success Depends On Our Ability To Introduce New Products On A Timely Basis.*

We compete in markets characterized by rapid technological change, evolving industry standards and continuous improvements in products. Due to constant changes in these markets, our future success depends on our ability to improve our manufacturing processes, systems and products. To remain competitive we must continually introduce new and improved products. Our business, financial condition, results of operations and cash flows may be materially and adversely affected if:

- we are unable to improve our existing products on a timely basis;
- our new products are not introduced on a timely basis or do not achieve sufficient market penetration; or
- our new products experience reliability or quality problems.

*If The Internet Does Not Continue To Grow As Expected And Demand Does Not Increase For Our Communications Products, Our Business Will Suffer.*

Our future success as a manufacturer of optical components, modules and subsystems ultimately depends on the continued growth of the communications industry, and, in particular, the growth of the Internet as a global communications system. As part of that growth, we are relying on increasing demand for high-content voice, text and other data delivered over high-speed connections (i.e., high bandwidth communications). As Internet usage and bandwidth demand increase, so does the need for advanced optical networks to provide the required bandwidth. Without Internet and bandwidth growth, the need for our advanced communications products, and hence our future growth as a manufacturer of these

products, is jeopardized. Currently, while generally increasing demand for Internet access is apparent, less evident is when order capacity will be absorbed. Moreover, multiple service providers compete to supply the existing demand. Also, currently, fiberoptic networks have significant excess capacity. The combination of a large number of service providers and excess network capacity has resulted in severely depressed prices for bandwidth. Until pricing recovers, service providers have less incentive to install equipment and, thus, little need for many of our communications products.

Ultimately, should long-term expectations for Internet growth and bandwidth demand not be realized, our business would be significantly harmed.

*Shifts In Industry-wide Demands And Inventories Could Result In Significant Inventory Write-downs.*

The life cycles of some of our products depend heavily upon the life cycles of the end products into which our products are designed. Products with short life cycles require us to manage production and inventory levels closely. We evaluate our ending inventories on a quarterly basis for excess quantities, impairment of value and obsolescence. This evaluation includes analysis of sales levels by product and projections of future demand based upon input received from our customers, sales team and management estimates. We reserve for inventories on hand that are greater than 12-months old, unless there is an identified need for the inventory. In addition, we write off inventories that are considered obsolete based upon changes in customer demand, manufacturing process



changes that result in existing inventory obsolescence or new product introductions, which eliminate demand for existing products. Remaining inventory balances are adjusted to approximate the lower of our manufacturing cost or market value. If future demand or market conditions are less favorable than our estimates, additional inventory write-downs may be required. In fiscal 2002, EMCORE recorded a \$11.9 million inventory charge for excess raw material and finished goods inventory that EMCORE believed it was carrying as a result of market conditions. In fiscal 2003, EMCORE recorded a \$2.0 million inventory charge related to certain transceiver devices that were later determined to be non-saleable because of design modifications. We cannot assure investors that obsolete or excess inventories, which may result from unanticipated changes in the estimated total demand for our products and/or the estimated life cycles of the end products into which our products are designed, will not affect us beyond the inventory charges that we have already taken.

*The Time And Costs Of Developing New Products May Exceed Our Budget And Our Products May Not Be Commercially Successful.*

We have recently introduced a number of new products and expect to be introducing additional new products in the near future. The commercialization of new products involves substantial expenditures in research and development, production and marketing. We may be unable to successfully design or manufacture these new products and may have difficulty penetrating new markets.

Because it is generally not possible to predict the amount of time required and the costs involved in achieving certain research, development and engineering objectives, actual development costs may exceed budgeted amounts and estimated product development schedules may be extended. Our business, financial condition, results of operations and cash flows could suffer if we incur budget overruns or delays in our research and development efforts.

*We May Engage In Acquisitions That May Harm Our Operating Results, Dilute Our Shareholders And Cause Us To Incur Debt.*

We may pursue acquisitions to acquire new technologies, products or service offerings. Future acquisitions by us may involve the following:

- use of significant amounts of cash;
- potentially dilutive issuances of equity securities on potentially unfavorable items; and
- incurrence of debt on potentially unfavorable terms, as well as amortization expenses related to other intangible assets.

In addition, acquisitions involve numerous risks, including:

- inability to achieve anticipated synergies;

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- difficulties in the integration of the operations, technologies, products and personnel of the acquired company;
  - diversion of management's attention from other business concerns;
  - risks of entering markets in which we have no or limited prior experience; and
  - potential loss of key employees of the acquired company or of EMCORE.

From time to time, we have engaged in discussions with acquisition candidates regarding potential acquisitions of product lines, technologies and businesses. If acquisitions occur, we cannot be certain that our business, operating results and financial condition will not be materially and adversely affected.

In the past two years we have completed several major acquisitions which have reoriented EMCORE's strategy and broadened our product lines within our target markets. However, if customer demand in these markets does not meet current expectations, our revenues could be significantly reduced, and we could suffer a material adverse effect on our financial condition, results of operations and cash flows.

*Our Recent Acquisitions Place A Strain On Our Resources.*

We are in a dynamic business and our recent acquisitions have presented many challenges. These acquisitions have placed and will continue to place a significant strain on our management, financial, sales and other employees and on our internal systems and controls. If we are unable to effectively manage multiple facilities and a joint venture in geographically distant locations, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

*Our Industry Is Rapidly Changing.*

The compound semiconductor industry is changing rapidly due to, among other things, continuous technological improvements in products and evolving industry standards. This industry is marked by the continuous introduction of new products and increased capacity for services similar to those provided by us. Future technological advances in the compound semiconductor industry may result in the availability of new products or increase the efficiency of existing products. If a technology becomes available that is more cost effective or creates a superior product, we may be unable to access such technology or its use may involve substantial capital expenditures, which we may be unable to finance. There can be no assurance that existing, proposed or as yet undeveloped technologies will not render our technology less profitable or that we will have available the financial and other resources necessary to compete effectively against companies possessing such technologies. There can be no assurance that we will be able to adapt to technological changes or offer competitive products on a timely or cost effective basis.

*The Markets In Which We Compete Are Highly Competitive. An Increase In Competition Would Limit Our Ability To Maintain Or Increase Our Market Share.*

We face substantial competition from a number of companies, many of which have greater financial, marketing, manufacturing and technical resources. Larger competitors could spend more on research and development, which could give those competitors an advantage in meeting customer demand. We expect that existing and new competitors will improve the design of their existing products and will introduce new products with enhanced performance characteristics. The introduction of new products or more efficient production of existing products by our competitors could result in price reductions and increases in expenses, and reduce market acceptance of our products, which could diminish our market share and gross margins.

*Fluctuations In Our Quarterly Operating Results May Negatively Impact Our Stock Price.*

Our revenues and operating results may vary significantly from quarter to quarter due to a number of factors particular to EMCORE and the compound semiconductor industry. Not all of these factors are in our control. These factors include:

- the volume and timing of orders and payments for our products;



- the timing of our announcements and introduction of new products and of similar announcements by our competitors;

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- downturns in the market for our customers' products;
  - regional economic conditions, particularly in Asia where we derive a significant portion of our revenues;
  - price volatility in the compound semiconductor industry; and
  - changes in product mix.

These factors may cause our operating results for future periods to be below the expectations of analysts and investors. This may cause a decline in the price of our common stock.

*General Electric Lighting, Our Joint Venture Partner, Who Has Majority Ownership and Control Of GELcore, May Make Decisions That We Do Not Agree With And That Adversely Affect Our Net Income.*

We have a 49% minority interest in our GELcore joint venture with General Electric Lighting. A board of managers governs GELcore with representatives from both General Electric Lighting and EMCORE. Many fundamental decisions must be approved by both parties, which means we will be unable to direct the operation and direction of GELcore without the agreement of General Electric Lighting. If we are unable to agree on important issues with General Electric Lighting, GELcore's business may be delayed or interrupted, which may, in turn, materially and adversely affect our business, financial condition, results of operations and cash flows.

We have devoted and will be required to continue to devote significant funds and technologies to GELcore to develop and enhance its products. In addition, GELcore requires that some of our employees devote much of their time to its projects. This places a strain on our management, scientific, financial and sales employees. If GELcore is unsuccessful in developing and marketing their products, our business, financial condition, results of operations and cash flows may be materially and adversely affected.

General Electric Lighting and EMCORE have agreed that our joint venture will be the sole vehicle for each party's participation in the solid state lighting market. General Electric Lighting and EMCORE have also agreed to several limitations during the life of the venture and thereafter relating how each of us can make use of the joint venture's technology. One consequence of these limitations is that in certain circumstances, such as a material default by us or certain sales of our interest in the joint venture, we would not be permitted to use the joint venture's technology to compete against General Electric Lighting in the solid state lighting market.

*Since A Large Percentage of Our Revenues Are From Foreign Sales, Certain Export Risks May Disproportionately Affect Our Revenues.*

Sales to customers located outside the U.S. accounted for approximately 43% of our revenues in fiscal 2003, 33% of our revenues in fiscal 2002 and 48% of our revenues in fiscal 2001. Sales to customers in Asia represent the majority of our international sales. We believe that international sales will continue to account for a significant percentage of our revenues. Because of this, the following export risks may disproportionately affect our revenues:

- political and economic instability may inhibit export of our devices and limit potential customers' access to U.S. dollars in a country or region in which our customers are located;
- we may experience difficulties in the timeliness of collection of foreign accounts receivable and be forced to write off receivables from foreign customers;
- tariffs and other barriers may make our devices less cost competitive;
- we may have difficulty in staffing and managing our international operations;
- the laws of certain foreign countries may not adequately protect our trade secrets and intellectual property and may be burdensome to comply with; and
- potentially adverse tax consequences to our customers may make our devices not cost competitive.

*We Will Lose Sales If We Are Unable To Obtain Government Authorization To Export Our Products.*

Exports of our products to certain destinations, such as the People's Republic of China, Argentina, Brazil, India, Russia, Malaysia and Taiwan, may require pre-shipment authorization from U.S. export

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control authorities, including the U.S. Departments of Commerce and State. Authorization may be conditioned on end-use restrictions. Failure to receive these authorizations may materially and adversely affect our revenues and in turn our business, financial condition, results of operations and cash flows from international sales.

Our photovoltaics business is particularly sensitive to export control issues. All of our commercially available photovoltaic products are export-controlled and are currently subject to the jurisdiction of the U.S. Department of Commerce. Many of our customers are located in countries, like Russia, India, Argentina and Brazil, for which export licenses are required. Moreover, given the current global political climate, obtaining export licenses may be more difficult and time-consuming than in the past. Failure to obtain export licenses for photovoltaic shipments could significantly reduce revenues of our materials-related segment and could have a material adverse effect on our financial condition, results of operations and cash flows.

*Our Operating Results Could Be Harmed If We Lose Access To Sole Or Limited Sources Of Materials Or Services.*

We currently obtain some components and services for our products from limited or single sources. We generally do not carry significant inventories of any raw materials. Because we often do not account for a significant part of our vendors' business, we may not have access to sufficient capacity from these vendors in periods of high demand. In addition, we risk having important suppliers terminate product lines, change business focus or even go out of business. If we were to change any of our limited or sole source vendors, we would be required to re-qualify each new vendor. Re-qualification could prevent or delay product shipments that could negatively affect our results of operations. In addition, our reliance on these vendors may negatively affect our



production if the components vary in quality or quantity. If we are unable to obtain timely deliveries of sufficient components of acceptable quality or if the prices of components for which we do not have alternative sources increase, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

*Our Products Are Difficult To Manufacture And Our Production Could Be Disrupted If We Are Unable To Avoid Manufacturing Difficulties.*

We manufacture all of our wafers and devices in our manufacturing facilities. Minute impurities, difficulties in the production process, defects in the layering of the devices' constituent compounds, wafer breakage or other factors can cause a substantial percentage of wafers and devices to be rejected or numerous devices on each wafer to be non-functional. These factors can result in lower than expected production yields, which would delay product shipments and may materially and adversely affect our operating results. We have experienced difficulties in achieving planned yields in the past, particularly in pre-production and upon initial commencement of full production volumes, which have adversely affected our gross margins. Because the majority of our costs of manufacture are relatively fixed, the number of shippable devices per wafer for a given product is critical to our financial results. Therefore, it is critical for us to improve the number of shippable product per wafer and increase the production volume of wafers in order to maintain and improve our results of operations. Additionally, because we manufacture products internally, any interruption in manufacturing resulting from fire, natural disaster, equipment failures or otherwise could materially and adversely affect our business, financial condition, results of operations and cash flows.

*We Face Lengthy Sales And Qualifications Cycles For Our Products And, In Many Cases, Must Invest A Substantial Amount Of Time And Funds Before We Receive Orders.*

Several of our products are currently being tested to determine whether they meet customer or industry specifications. During this qualification period, we invest significant resources and dedicate substantial production capacity to the manufacture of these new products, prior to any commitment to purchase by the prospective customer and without generating significant revenues from the qualification process. If we are unable to meet these specifications or do not receive sufficient orders to profitably use the dedicated production capacity, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

Our historical and future budgets for operating expenses, capital expenditures, operating leases and service contracts are based upon our assumptions as to the anticipated market acceptance of our products.

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Because of the lengthy lead time required for our product development and the changes in technology that typically occur during such period, it is difficult to estimate customer demand for a product accurately. If our products do not achieve expected customer demand, our business, financial condition, results of operation and cash flows could be materially and adversely affected.

*If Our Contract Manufacturers Fail To Deliver Quality Products At Reasonable Prices And On A Timely Basis, Our Results Of Operations And Financial Condition Could Be Materially Affected.*

We are increasing our use of contract manufacturers as an alternative to our own manufacturing of products. If these contract manufacturers do not fulfill their obligations to us, or if we do not properly manage these relationships and the transition of production to these contract manufacturers, our existing customer relationships may suffer. In addition, by undertaking these activities, we run the risk that the reputation and competitiveness of our products and services may deteriorate as a result of the reduction of our control over quality and delivery schedules. We also may experience supply interruptions, cost escalations and competitive disadvantages if our contract manufacturers fail to develop, implement or maintain manufacturing methods appropriate for our products and customers.

Our supply chain and manufacturing process relies on accurate forecasting to provide us with optimal margins and profitability. Because of market uncertainties, forecasting is becoming much more difficult. In addition, as we come to rely more heavily on contract manufacturers, we may have fewer personnel resources with expertise to manage these third-party arrangements.

*Industry Demand For Skilled Employees, Particularly Scientific And Technical Personnel With Compound Semiconductor Experience, Exceeds The Number Of Skilled Personnel Available.*

Our future success depends, in part, on our ability to attract and retain certain key personnel, including scientific, operational and management personnel. The competition for attracting and retaining these employees, especially scientists and technical personnel, is intense. Because of the intense competition for these skilled employees, we may be unable to retain our existing personnel or attract additional qualified employees in the future. If we are unable to retain our skilled employees and attract additional qualified employees to the extent necessary to keep up with our business demands and changes, our financial condition, results of operations and cash flows may be materially and adversely affected.

*Protecting Our Trade Secrets And Obtaining Patent Protection Is Critical To Our Ability To Effectively Compete For Business.*

Our success and competitive position depend on protecting our trade secrets and other intellectual property. Our strategy is to rely both on trade secrets and patents to protect our manufacturing and sales processes and products. Reliance on trade secrets is only an effective business practice insofar as trade secrets remain undisclosed and a proprietary product or process is not reverse engineered or independently developed. We take certain measures to protect our trade secrets, including executing non-disclosure agreements with our employees, our joint venture partner, customers and suppliers. If parties breach these agreements or the measures we take are not properly implemented, we may not have an adequate remedy. Disclosure of our trade secrets or reverse engineering of our proprietary products, processes or devices could materially and adversely affect our business, financial condition, results of operations and cash flows.

There is also no assurance that any patents will afford us commercially significant protection of our technologies or that we will have adequate resources to enforce our patents. We are actively pursuing patents on some of our recent inventions. In addition, the laws of certain other countries may not protect our intellectual property to the same extent as U.S. laws.

*Our Failure To Obtain Or Maintain The Right To Use Certain Intellectual Property May Adversely Affect Our Financial Results.*

The compound semiconductor, optoelectronics, and fiber optic communications industries are characterized by frequent litigation regarding patent and other intellectual property rights. From time to time we have received and may receive in the future, notice of claims of infringement of other parties' proprietary rights and licensing offers to commercialize third party patent rights. Although we are not currently involved in any litigation relating to our intellectual property, there can be no assurance that:

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- infringement claims (or claims for indemnification resulting from infringement claims) will not be asserted against us or that such claims will not be successful;
- future assertions will not result in an injunction against the sale of infringing products or otherwise significantly impair our business and results of operations;
- any patent owned by us will not be invalidated, circumvented or challenged; or
- we will not be required to obtain licenses, the expense of which may adversely affect our results of operations and profitability.

In addition, effective copyright and trade secret protection may be unavailable or limited in certain foreign countries. Litigation, which could result in substantial cost to us and diversion of our resources, may be necessary to defend our rights or defend us against claimed infringement of the rights of others.

*Our Management's Stock Ownership Gives Them The Power To Control Business Affairs And Prevent A Takeover That Could Be Beneficial To Unaffiliated Shareholders.*

Certain members of our management, specifically Thomas J. Russell, Chairman of our Board, Reuben F. Richards, Jr., President, Chief Executive Officer and a director, and Robert Louis-Dreyfus, a director, are former members of Jesup & Lamont Merchant Partners, L.L.C. They collectively beneficially own more than 20% of our common stock. Accordingly, such persons will continue to hold sufficient voting power to control our business and affairs for the foreseeable future. This concentration of ownership may also have the effect of delaying, deferring or preventing a change in control of our company, which could have a material adverse effect on our stock price.

*Unsuccessful Control Of The Hazardous Raw Materials Used In Our Manufacturing Process Could Result In Costly Remediation Fees, Penalties Or Damages Under Environmental And Safety Regulations.*

The production of wafers and devices involves the use of certain hazardous raw materials, including, but not limited to, ammonia, gallium, phosphine and arsine. If our control systems are unsuccessful in preventing a release of these materials into the environment or other adverse environmental conditions occur, we could experience interruptions in our operations and incur substantial remediation and other costs. Failure to comply with environmental and health and safety laws and regulations may materially and adversely affect our business, financial condition, results of operations and cash flows.

*Recently Enacted And Proposed Regulatory Changes May Cause Us To Incur Increased Costs.*

Recently enacted and proposed changes in the laws and regulations affecting public companies, including the provisions of the Sarbanes-Oxley Act of 2002, will increase our expenses as we evaluate the implications of new rules and devote resources to respond to the new requirements. In particular, we expect to incur additional SG&A expense as we implement Section 404 of the Sarbanes-Oxley Act, which requires management to report on, and our independent auditors to attest to, our internal controls. Compliance with these new rules will require management to devote substantial time and attention, which could prove to be disruptive to product development, marketing and other business activities. Further, the impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors or as executive officers, which could harm our business.

*We May Have Difficulty Obtaining Director And Officer Liability Insurance In Acceptable Amounts For Acceptable Rates Which Could Impair Our Ability To Recruit And Retain Qualified Officers And Directors.*

Like most other public companies, we carry insurance protecting our officers and directors against claims relating to the conduct of our business. Historically, this insurance covered, among other things, the costs incurred by companies and their management to defend against and resolve claims relating to management conduct and results of operations, such as securities class action claims. These claims typically are extremely expensive to defend against and resolve. Hence, as is customary, we purchase and maintain insurance to cover some of these costs. We pay significant premiums to acquire and maintain this insurance, which is provided by third-party insurers, and we agree to underwrite a portion of such exposures under the terms of the insurance coverage. Over the last several years, the premiums we have paid for this insurance have increased substantially. One consequence of the current economic environment and decline in stock prices has been a substantial increase in the number of securities class

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actions and similar claims brought against public corporations and their management. Consequently, insurers providing director and officer liability insurance have in recent periods sharply increased the premiums they charge for this insurance, raised retentions (that is, the amount of liability that a company is required to pay to defend and resolve a claim before any applicable insurance is provided), and limited the amount of insurance they will provide. Moreover, insurers typically provide only one-year policies.

Each year we negotiate with insurers to renew our director and officer insurance. Particularly in the current economic environment, we cannot assure you that in the future we will be able to obtain sufficient director and officer liability insurance coverage at acceptable rates and with acceptable deductibles and other limitations. Failure to obtain such insurance could materially harm our financial condition in the event that we are required to defend against and resolve any future securities class actions or other claims made against us or our management arising from the conduct of our operations. Further, the inability to obtain such insurance in adequate amounts may impair our future ability to retain and recruit qualified officers and directors.

*Our Business Or Our Stock Price Could Be Adversely Affected By Issuance Of Preferred Stock.*

Our board of directors is authorized to issue up to 5,882,352 shares of preferred stock with such dividend rates, liquidation preferences, voting rights, redemption and conversion terms and privileges as our board of directors, in its sole discretion, may determine. The issuance of shares of preferred stock may result in a decrease in the value or market price of our common stock, or our board of directors could use the preferred stock to delay or discourage hostile bids for control of us in which shareholders may receive premiums for their common stock or to make the possible sale of EMCORE or the removal of our management more difficult. The issuance of shares of preferred stock could adversely affect the voting and other rights of the holders of common stock and may depress the price of the Company's stock.

*Certain Provisions Of New Jersey Law And Our Charter May Make A Takeover Of Our Company Difficult Even If Such Takeover Could Be Beneficial To Some Of Our Shareholders.*

New Jersey law and our certificate of incorporation, as amended, contain certain provisions that could delay or prevent a takeover attempt that our shareholders may consider in their best interests. Our board of directors is divided into three classes. Directors are elected to serve staggered three-year terms and are not subject to removal except for cause by the vote of the holders of at least 80% of our capital stock. In addition, approval by the holders of 80% of our voting stock is required for certain business combinations unless these transactions meet certain fair price criteria and procedural requirements or are approved by two-thirds of our continuing directors. We may in the future adopt other measures that may have the effect of delaying or discouraging an unsolicited



takeover, even if the takeover were at a premium price or favored by a majority of unaffiliated shareholders. Certain of these measures may be adopted without any further vote or action by our shareholders, and this could depress the price of the Company's common stock.

*The Price Of Our Common Stock Has Fluctuated Widely In The Last Year And May Fluctuate Widely In The Future.*

Our common stock is traded on the NASDAQ National Market, which has experienced and may continue to experience significant price and volume fluctuations that could adversely affect the market price of our common stock without regard to our operating performance. In addition, we believe that factors such as quarterly fluctuations in financial results, earnings below analysts' estimates, and financial performance and other activities of other publicly traded companies in the semiconductor industry could cause the price of our common stock to fluctuate substantially. In addition, in recent periods, our common stock, the stock market in general, and the market for shares of small capitalization and semiconductor industry-related stocks in particular, have experienced extreme price fluctuations which have often been unrelated to the operating performance of affected companies. Any similar fluctuations in the future could adversely affect the market price of our common stock.

Our stock price has fluctuated widely in the last year and may fluctuate widely in the future. In fiscal 2003, our stock price has been as high as \$3.98 per share and as low as \$0.98 per share. Volatility in the price of our common stock may be caused by other factors outside of our control and may be unrelated or disproportionate to our operating results.

Item 2. Properties

The following chart contains certain information regarding each of EMCORE's principal facilities, all of which are used by our components and subsystems segment. Except for the storage facility located in Somerset, NJ, each of these facilities contains office space, marketing and sales, and research and development (R&D) space. EMCORE also leases office space in Santa Clara, California, China, South Korea and Taiwan, as well as a small manufacturing/R&D facility in Downers Grove, Illinois.

Location	Function	Sq. Feet	Terms
Somerset, New Jersey	Corporate Headquarters	40,000	Lease expires in 2005 <sup>(1)</sup>
	Manufacturing for RF materials and MR sensors	19,500	Lease expires in 2005 <sup>(2)</sup>
	Storage facility	47,000	Lease expires in 2006 <sup>(1)(3)</sup>
Albuquerque, New Mexico	Manufacturing buildings for solar cells, VCSELs and fiber optic components	145,000	Owned by EMCORE <sup>(4)</sup>
City of Industry, California	Manufacturing building for solar panels	71,699	Lease expires in 2005 <sup>(1)</sup>
Alhambra, California	Manufacturing buildings for CATV and Satcom products	75,000	Leases expire in 2007 <sup>(1)</sup>

(1) All leases have the option to be renewed by EMCORE, subject to inflation adjustments.

(2) EMCORE has the option to renew the lease from month to month, and also has a right of first offer to purchase the building in which the leased property is located.

(3) EMCORE subleases this space to a third party.

(4) EMCORE subleases approximately 20,000 square feet of this facility to third parties.

Item 3. Legal Proceedings

We have applied for and maintained export licenses through the U.S. Department of Commerce ("DOC") since 1996. These licenses authorized us to export MOCVD equipment and other materials. In February 2003, we discovered that we had failed to obtain export licenses for a total of 14 MOCVD reactor shipments to Taiwan and one such shipment to Singapore between 1997 and 1999. In May 2003, pursuant to Section 764.5 of the Export Administration Regulations, we filed a Voluntary Disclosure with the DOC disclosing these violations and related matters. We negotiated a monetary settlement with the DOC of \$400,000 and accrued the settlement amount in the first quarter of Fiscal 2004. The settlement was signed by EMCORE on December 8, 2003, and is currently pending signature at the DOC. The settlement amount is to be paid in two installments. The first installment is to be paid within thirty days of execution of the document by the DOC, and the final installment is due one year from that date.

From time to time, we are involved in other lawsuits, claims, investigations and proceedings that arise in the ordinary course of business. There are no matters pending that we expect to be material in relation to our business, consolidated financial condition, results of operations or cash flows.

Item 4. Submission of Matters to a Vote of Security Holders

Not applicable.

PART II

Item 5. Market for the Registrant's Common Equity and Related Shareholder Matters

EMCORE's common stock is traded on the NASDAQ National Market and is quoted under the symbol "EMKR". The following table sets forth the quarterly high and low sale prices for EMCORE's common stock during the two most recent fiscal years.

	high	low
Fiscal year ended September 30, 2002		
First Quarter	\$17.04	\$7.67
Second Quarter	\$16.97	\$7.59



Third Quarter	\$10.48	\$3.60
Fourth Quarter	\$ 6.00	\$1.42
<b>Fiscal year ended September 30, 2003</b>		
First Quarter	\$ 3.38	\$0.98
Second Quarter	\$ 2.50	\$1.65
Third Quarter	\$ 3.98	\$1.66
Fourth Quarter	\$ 3.90	\$2.40

The reported closing sale price of EMCORE's common stock on December 22, 2003 was \$5.11 per share. As of December 12, 2003, EMCORE had approximately 5,371 shareholders of record.

EMCORE has never declared or paid dividends on its common stock since its formation. EMCORE currently does not intend to pay dividends on its common stock in the foreseeable future so that it may reinvest its earnings in its business. The payment of dividends, if any, in the future will be at the discretion of the Board of Directors.

On January 25, 2001, EMCORE purchased all of the outstanding shares of Analytical Solutions, Inc. (ASI), a New Mexico corporation that provides failure analysis and related services. In consideration for this purchase, EMCORE issued a total of 40,775 common shares to the 14 former ASI shareholders in a private placement under Section 4(2) of the Securities Act. In May 2002, EMCORE sold all of the outstanding shares of ASI back to one of its original shareholders in return for a promissory note in the principal amount of approximately \$3.0 million and bearing interest at 5.71% per annum. This note matures on May 3, 2008 and is to be repaid through the issuance of credits against future ASI services over the term of the note.

#### Equity Compensation Plan Information

The following table sets forth, as of September 30, 2003, the number of securities outstanding under each of EMCORE's stock option plans, the weighted average exercise price of such options, and the number of options available for grant under such plans.

<b>Plan Category</b>	<b>Number of securities to be issued upon exercise of outstanding options, warrants and rights</b>	<b>Weighted average exercise price of outstanding options, warrants and rights</b>	<b>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</b>
Equity compensation plans approved by security holders	5,749,146	\$ 3.98	575,832
Equity compensation plans not approved by security holders	1,920	0.23	—
Totals	<u>5,751,066</u>	<u>\$ 3.98</u>	<u>575,832</u>

#### Item 6. Selected Financial Data

The following selected consolidated financial data for EMCORE's five most recent fiscal years ended September 30, 2003 is qualified by reference to and should be read in conjunction with the Financial Statements and the Notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this Annual Report. The Statement of Operations data set forth below with respect to fiscal years 2003, 2002 and 2001 and the Balance Sheet data as of September 30, 2003 and 2002 are derived from EMCORE's audited financial statements included elsewhere in this document. The Statement of Operations data for fiscal years 2000 and 1999 and the Balance Sheet data as of September 30, 2001, 2000 and 1999 are derived from audited financial statements not included herein. All share amounts have been restated to reflect EMCORE's two-for-one (2:1) common stock split that was effective on September 18, 2000.

Significant transactions that affect the comparability of EMCORE's operating results and financial condition:

- In March 2002, EMCORE acquired Tecstar for a total cash purchase price, including related acquisitions costs, of approximately \$25.1 million. The results of operations from this acquisition have been included in EMCORE's consolidated results of operations from the acquisition closing date.
- In fiscal 2002, EMCORE recorded pre-tax charges to income totaling \$51.2 million, which included restructuring and impairment charges of \$36.7 million and other charges of \$14.5 million, as described below:
  - Included in the provision for restructuring and impairment charges were severance charges of \$1.9 million related to employee termination costs.
  - EMCORE also recorded \$34.8 million of non-cash impairment charges related to its fixed assets.
  - EMCORE recorded a \$11.9 million inventory write-down charge to cost of revenues and a \$2.6 million additional reserve for doubtful accounts.
- In January 2003, EMCORE purchased Ortel, for \$26.2 million in cash. The results of operations from this acquisition have been included in EMCORE's consolidated results of operations from the acquisition closing date.

<b>As of September 30,</b>				
<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>
<i>(in thousands)</i>				

#### Balance Sheet data

Cash, cash equivalents and marketable securities.	\$ 28,439	\$ 84,181	\$147,661	\$101,745	\$ 7,165
Working capital	55,543	111,825	201,213	111,587	20,690
Total assets	232,439	285,943	403,553	243,902	99,611



Long-term liabilities	161,791	175,087	175,046	1,295	9,038
Redeemable convertible preferred stock	—	—	—	—	14,193
Shareholders' equity	\$ 44,772	\$ 81,950	\$197,127	\$199,322	\$61,623

	For the fiscal years ended September 30,				
	2003	2002	2001	2000	1999
	(in thousands, except per share amounts)				
<b>Statements of Operations data</b>					
Revenues	\$113,106	\$ 87,772	\$184,614	\$104,506	\$ 58,341
Cost of revenues	98,589	88,414	114,509	61,301	33,158
Gross profit (loss)	14,517	(642)	70,105	43,205	25,183
Operating expenses:					
Selling, general and administrative	28,990	28,227	29,851	21,993	14,433
Goodwill amortization	—	—	1,147	4,392	4,393
Research and development	22,181	40,970	53,391	32,689	20,713
(Gain) loss from debt extinguishment (1)	(6,614)	—	—	—	1,334
Impairment and restructuring	—	36,721	—	—	—
Total operating expenses	44,557	105,918	84,389	59,074	40,873
Operating loss	(30,040)	(106,560)	(14,284)	(15,869)	(15,690)
Other (income) expense:					
Interest (income) expense, net	7,257	6,107	(2,048)	(4,492)	866
Imputed warrant interest expense	—	—	—	843	1,136
Other (income) expense	—	14,388	(15,920)	—	—
Equity in net loss of unconsolidated affiliates	1,228	2,706	12,326	13,265	4,997
Total other (income) expense	8,485	23,201	(5,642)	9,616	6,999
Loss before cumulative effect of a change in accounting principle	(38,525)	(129,761)	(8,642)	(25,485)	(22,689)
Cumulative effect of change in accounting principle	—	—	(3,646)	—	—
Net loss	<u>\$ (38,525)</u>	<u>\$ (129,761)</u>	<u>\$ (12,288)</u>	<u>\$ (25,485)</u>	<u>\$ (22,689)</u>
<b>Per share data</b>					
Weighted average shares used in calculating per share data	<u>36,999</u>	<u>36,539</u>	<u>34,438</u>	<u>31,156</u>	<u>21,180</u>
Loss per basic and diluted share before cumulative effect of change in accounting principle	<u>\$ (1.04)</u>	<u>\$ (3.55)</u>	<u>\$ (0.25)</u>	<u>\$ (0.82)</u>	<u>\$ (1.09)</u>
Net loss per basic and diluted share	<u>\$ (1.04)</u>	<u>\$ (3.55)</u>	<u>\$ (0.36)</u>	<u>\$ (0.82)</u>	<u>\$ (1.09)</u>

(1) In accordance with Statement of Financial Accounting Standards No. 145, *Rescission of FASB Statements 4, 44 and 64, Amendment of FASB Statement No. 13, and Technical Corrections*, EMCORE has reclassified the loss on the early extinguishment of debt recorded in fiscal 1999 from extraordinary item to a component of operating expenses.

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

This report includes forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These forward-looking statements are based largely on our current expectations and projections about future events and financial trends affecting the financial condition of our business. These forward looking statements may be identified by the use of words such as "expects", "anticipates", "intends", "plans", "believes", "estimate", "target", "may", "will" and variations of these words and similar expressions. These forward-looking statements are subject to business, economic and other risks and uncertainties, and actual results may differ materially from those discussed in these forward-looking statements. Factors that could contribute to these differences include, but are not limited to, those discussed under "Risk Factors", "Forward-Looking Statements" and elsewhere in this report. The cautionary statements made in this report should be read as being applicable to all forward-looking statements wherever they appear in this report. This discussion should be read in conjunction with the Consolidated Financial Statements, including the related footnotes.

### Company Overview

EMCORE Corporation, a New Jersey corporation established in 1984, offers a broad portfolio of compound semiconductor-based components and subsystems for the rapidly expanding broadband and wireless communication markets and the solid-state lighting industry. EMCORE continues to expand its comprehensive product portfolio to enable the transport of voice, data and video over copper, hybrid fiber/coax (HFC), fiber, satellite and wireless communication networks. The company is building upon its leading-edge compound semiconductor materials and device expertise to provide cost-effective components and subsystems for the cable television (CATV), telecommunications, data and storage, satellite and wireless communications markets. EMCORE supports these end markets through its EMCORE Fiber Optics, EMCORE Photovoltaics and EMCORE Electronic Materials and Devices product lines. Through its 49% ownership participation in GELcore, LLC, EMCORE plays a vital role in developing and commercializing next-generation LED technology for use in the general illumination market.

### Segment Data

EMCORE had two reportable operating segments: the systems and the components and subsystems segment. The segments reported are the segments for which separate financial information is available and



evaluated regularly by management in deciding how to allocate resources and in assessing performance.

The systems segment was our TurboDisc systems business which designed, developed and manufactured metal organic chemical vapor deposition (MOCVD) systems and manufacturing processes. Systems segment revenues were derived primarily from sales of TurboDisc MOCVD systems, as well as spare parts, services, and other related products. In fiscal 2004, EMCORE will report first quarter results for the systems segment as a discontinued operation due to the divestiture.

The components and subsystems segment is comprised of our Fiber Optics, Photovoltaics and Electronic Materials and Devices product lines. EMCORE's Fiber Optics product line supports our CATV, telecommunications, data and storage and Satcom target markets. Specific products for this communications-related product line include optical components and subsystems for CATV and FTTx, VCSEL and PIN photodiodes components, 10G LX4, CX4, TOSA, ROSA packaged parts and modules, and Satcom transmitter and receiver components. EMCORE's Photovoltaic revenues are derived primarily from the sales of solar power conversion products including solar cells, covered interconnect solar cells (CICs) and solar panels. Revenues from the Electronic Materials and Devices product line include wireless products, such as RF materials including HBTs and enhancement-mode pHEMTs, and also MR sensors and process development technology.

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Summarized financial information for the reportable segments as of and for the years ended September 30, 2003, 2002 and 2001 is shown below. There are no intercompany sales transactions between the two segments. The accounting policies of the segments are described in the footnotes to the financial statements.

	For the year ended September 30, 2003			
	Systems segment	Components and subsystems segment	Unallocated expenses	TOTAL
	(in thousands)			
<b>STATEMENTS OF OPERATIONS</b>				
Revenues	\$52,681	\$ 60,425	\$ —	\$113,106
Cost of revenues	36,545	62,044	—	98,589
Gross profit (loss)	16,136	(1,619)	—	14,517
Gross margin	30.6%	(2.7%)	—	12.8%
Operating expenses:				
Selling, general and administrative	9,476	19,514	—	28,990
Research and development	5,773	16,408	—	22,181
Gain from debt extinguishment	—	—	(6,614)	(6,614)
Total operating expenses	15,249	35,922	(6,614)	44,557
Operating income (loss)	887	(37,541)	6,614	(30,040)
Other expenses:				
Interest expense, net	—	—	7,257	7,257
Equity in joint venture	—	—	1,228	1,228
Total other expenses	—	—	8,485	8,485
Net income (loss)	<u>\$ 887</u>	<u>\$(37,541)</u>	<u>\$(1,871)</u>	<u>\$(38,525)</u>

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	For the year ended September 30, 2002				For the year ended September 30, 2001			
	Systems segment	Components and subsystems segment	Unallocated expenses	TOTAL	Systems segment	Components and subsystems segment	Unallocated expenses	TOTAL
	2002	2002	2002	2002	2001	2001	2001	2001
(in thousands)								
<b>STATEMENTS OF OPERATIONS</b>								
Revenues	\$ 35,878	\$ 51,894	\$ —	\$ 87,772	\$131,141	\$ 53,473	\$ —	\$184,614
Cost of revenues	25,650	62,764	—	88,414	72,725	41,784	—	114,509
Gross profit (loss)	10,228	(10,870)	—	(642)	58,416	11,689	—	70,105
Gross margin	28.5%	(20.9%)	—	(0.7%)	44.5%	21.9%	—	38.0%
Operating expenses:								
Selling, general and administrative	15,534	12,693	—	28,227	15,748	14,103	—	29,851
Research and development	12,878	28,092	—	40,970	11,821	41,570	—	53,391
Goodwill amortization	—	—	—	—	—	1,147	—	1,147
Impairment and restructuring	5,085	31,636	—	36,721	—	—	—	—
Total operating expenses	33,497	72,421	—	105,918	27,569	56,820	—	84,389
Operating income (loss)	(23,269)	(83,291)	—	(106,560)	30,847	(45,131)	—	(14,284)
Other expenses:								
Interest expense, net	—	—	6,107	6,107	—	—	(2,048)	(2,048)
Other (income) expense	—	—	14,388	14,388	—	—	(15,920)	(15,920)
Equity in joint ventures	—	—	2,706	2,706	—	—	12,326	12,326
Total other expenses	—	—	23,201	23,201	—	—	(5,642)	(5,642)
Income (loss) before cumulative effect of a change in accounting principle	(23,269)	(83,291)	(23,201)	(129,761)	30,847	(45,131)	5,642	(8,642)
Cumulative effect of a change in accounting principle	—	—	—	—	(3,646)	—	—	(3,646)
Net income (loss)	<u>\$(23,269)</u>	<u>\$(83,291)</u>	<u>\$(23,201)</u>	<u>\$(129,761)</u>	<u>\$ 27,201</u>	<u>\$(45,131)</u>	<u>\$ 5,642</u>	<u>\$(12,288)</u>

In fiscal 2002, EMCORE recorded pre-tax charges to income totaling \$51.2 million, which included fixed asset impairment charges of \$34.8 million, excess inventory reserve of \$11.9 million, loss provision for accounts receivable of \$2.6 million and restructuring charges of \$1.9 million. In January 2003, EMCORE acquired Ortel, which contributed approximately \$23.6 million of fiber optic revenues in fiscal 2003.

## Customers

During fiscal 2003, revenues from Cree Inc., associated with the systems segment, represented 11.5% of total revenue. During fiscal 2002, revenues from Motorola, associated with both the systems and components and subsystems segments represented 12.9% of total revenue. In fiscal 2001, no single customer accounted for more than 10% of total revenue.



EMCORE has generated a significant portion of its sales to customers outside the United States. Historically, EMCORE has received most payments for products and services in U.S. dollars, and therefore, EMCORE does not anticipate that fluctuations in any currency will have a material effect on its financial condition or results of operations. The following chart contains a breakdown of EMCORE's consolidated revenues by geographic region:

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Region	For the fiscal years ended September 30,					
	2003		2002		2001	
	Revenue	% of revenue	Revenue	% of revenue	Revenue	% of revenue
	<i>(in thousands)</i>					
United States	\$ 64,189	56.8%	\$58,844	67.0%	\$ 96,551	52.3%
Asia	34,132	30.2%	15,268	17.4%	76,848	41.6%
Europe	14,785	13.0%	13,660	15.6%	11,215	6.1%
TOTAL	<u>\$113,106</u>	<u>100%</u>	<u>\$87,772</u>	<u>100%</u>	<u>\$184,614</u>	<u>100%</u>

In fiscal 2002, sales to Asia and the United States declined dramatically because of a large decrease in capital spending by our customers and a consequent decrease in demand for our MOCVD systems. Sales to the United States include sales to Canada which have not, historically, been material.

### Backlog

As of September 30, 2003, EMCORE had a backlog (not including our systems-segment backlog of \$18.4 million) believed to be firm of approximately \$33.1 million. This compares to a backlog of \$19.3 million (exclusive of systems-segment backlog) as reported at the end of the prior year. Half of the increase in backlog was attributable to the Ortel acquisition. Historically, significant portions of our components and subsystems revenue are not reported in backlog since our customers have reduced lead times. Many of our components and subsystems sales usually occur within the same month when the purchase order is received. The backlog does not include orders for product that have not met qualification specifications. We believe the entire backlog could be filled during fiscal 2004, however, especially given the current market environment, customers may delay shipment of certain orders. Backlog also could be adversely affected if customers unexpectedly cancel purchase orders accepted by us.

### Critical Accounting Policies

The preparation of financial statements requires management to make assumptions and estimates that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results may differ from those estimates. Critical accounting policies include those policies that are reflective of significant judgments and uncertainties, which potentially could produce materially different results under different assumptions and conditions. The significant accounting policies that we believe are the most critical to the understanding of reported financial results include the following.

- *Valuation of long-lived assets and intangible assets* — EMCORE reviews long-lived assets and intangible assets on an annual basis or whenever events or changes in circumstances suggest that they may be impaired. A long-lived asset is considered impaired when its anticipated undiscounted cash flow is less than its carrying value. In making this determination, EMCORE uses certain assumptions, including, but not limited to: (a) estimates of the fair market value of these assets, and (b) estimates of future cash flows expected to be generated by these assets, which are based on additional assumptions such as asset utilization, length of service that assets will be used in our operations and estimated salvage values.
- During fiscal 2002, we determined certain plant and equipment was impaired and as a result, we recorded impairment charges of \$34.8 million, of which \$4.0 million related to EMCORE's systems segment and \$30.8 million related to the components and subsystems segment. By December 2001, EMCORE completed new facilities in anticipation of expanding market prospects. Business forecasts updated in fiscal 2002 indicated significantly diminished prospects, primarily based on the downturn in the telecommunications industry. As a result of these circumstances, management determined that the long-lived assets should be assessed for impairment. Based on the outcome of this assessment, EMCORE recorded a \$23.5 million non-cash asset impairment charge to plant and equipment. This entire charge related to the components and subsystems segment. The fair values of the assets were determined based upon a calculation of the present value of the expected future

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cash flows to be generated by its facilities. The remainder of the impairment charge totaling \$11.3 million related to certain manufacturing assets that were disposed of. Such decision was made based upon the downturn in the economic environment that affected certain product lines causing these manufacturing assets to become idle.

- *Inventories* — Inventories are stated at the lower of cost or market with cost being determined using the first-in, first-out (FIFO) method. We evaluate our ending inventories on a quarterly basis for excess quantities, impairment of value and obsolescence. This evaluation includes analysis of sales levels by product and projections of future demand based upon input received from our customers, sales team and management estimates. If inventories on hand are in excess of demand, or if they are greater than 12-months old, appropriate reserves are provided. Remaining inventory balances are adjusted to approximate the lower of our manufacturing cost or market value. If future demand or market conditions are less favorable than our estimates, additional inventory write-downs may be required.

In fiscal 2002, EMCORE recorded a \$11.9 million inventory charge of which \$4.1 million was related to the systems segment and \$7.8 million was related to the components and subsystems segment. The inventory charge was for excess raw material and finished goods inventory that EMCORE believed it was carrying as a result of market conditions. In fiscal 2003, EMCORE recorded a \$2.0 million inventory charge related to its fiber optic product line. The write-down was attributable to certain transceiver devices that were later determined to be non-saleable because of design deficiencies.



- *Revenue Recognition*

Revenue from the systems segment was recognized upon shipment where product has met customer's specifications and when the title and ownership have passed to the customer. EMCORE's billing terms on system sales generally included a holdback of 10-20% on the total purchase price subject to completion of the installation and final acceptance process at the customer's site. EMCORE deferred this portion of revenue related to installation and final acceptance until such installation and final acceptance had been completed. In fiscal 2004, EMCORE will report first quarter results of the systems segment as a discontinued operation due to the divestiture.

Revenue from the components and subsystems segment is recognized upon shipment provided we have received a signed purchase order, the price is fixed, the product meets the customers' specifications, title and ownership have transferred to the customer and there is reasonable assurance of collection of the sales proceeds. The majority of our products have shipping terms that are FOB or FCA shipping point. The difference between FOB and FCA is that under FCA terms, the customer designates a shipping carrier of choice to be used. Under both terms, we fulfill the obligation of delivery when the goods are handed over to the carrier at our shipping dock. If inventory is maintained at a consigned location, revenue is recognized when our customer pulls product for its use.

As a result of the Tecstar acquisition in 2002, EMCORE records revenues from solar panel contracts using the percentage-of-completion method where the elapsed time from award of a contract to completion of performance tends to exceed 6 months. Revenue is recognized in proportion to actual costs incurred compared to total anticipated costs expected to be incurred for each contract. If estimates of costs to complete long-term contracts indicate a loss, a provision is made for the total loss anticipated. EMCORE has numerous contracts that are in various stages of completion. Such contracts require estimates to determine the appropriate cost and revenue recognition. EMCORE uses all available information in determining dependable estimates of the extent of progress towards completion, contract revenues and contract costs. Estimates are revised as additional information becomes available. During fiscal 2003, EMCORE recorded approximately \$0.2 million in anticipated losses on certain long-term contracts.

Contract revenue represents reimbursement by various U.S. Government entities to aid in the development of new technology. The contract funding may be based on either a cost-plus or a

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cost-share arrangement. Cost-plus funding is determined based on actual costs plus a set percentage margin. For the cost-share contracts, the actual costs relating to the activities to be performed by us under the contract are divided between the U.S. Government and us based on the terms of the contract. The government's cost share is then paid to us. A contract is considered complete when all significant costs have been incurred, and the research reporting requirements to the customer have been met. The contracts typically require the submission of a written report that documents the results of such research, as well as some material deliverables. The revenue and expense classification for contract activities is based on the nature of the contract. For contracts where we anticipate that funding will exceed direct costs over the life of the contract, funding is reported as contract revenue and all direct costs are reported as costs of contract revenue. For contracts under which we anticipate that direct costs of the activities subject to the contract will exceed amounts to be funded over the life of the contract, costs over and above the funded amount are reported as research and development expenses. Revenues from Government contracts amounted to approximately \$5.2 million, \$3.3 million and \$2.5 million for the years ended September 30, 2003, 2002 and 2001, respectively.

EMCORE also provides service for its products. Revenue from time and materials based service arrangements is recognized as the service is performed. Revenue from service contracts is recognized ratably over the term of such service contracts. Service revenue is insignificant for all periods presented.

In rare occurrences, at the customer's written request, EMCORE enters into bill and hold transactions whereby title transfers to the customer, but the product does not ship until a specified later date. EMCORE recognizes revenues associated with the sale of product from bill and hold arrangements when the product is complete, ready to ship, and all bill and hold criteria have been met.

- *Accounts Receivable* — EMCORE regularly evaluates the collectibility of its accounts receivable and accordingly maintains allowances for doubtful accounts for estimated losses resulting from the inability of our customers to meet their financial obligation to us. If the financial condition of our customers were to deteriorate, additional allowances may be required.
- *Accruals for Liabilities and Warranties.* EMCORE may incur costs for which we have not been billed. These costs can include legal and accounting fees, costs pertaining to our self-funded medical insurance, warranty costs and other expenses. EMCORE makes estimates for these costs using historical data or information gained directly from the service providers

The above listing is not intended to be a comprehensive list of all of our accounting policies. In many cases, the accounting treatment of a particular transaction is specifically dictated by generally accepted accounting principles. There are also areas in which management's judgment in selecting any available alternative would not produce a materially different result. See our audited consolidated financial statements and notes thereto included in this Annual Report on Form 10-K which contain a discussion of our accounting policies and other disclosures required by accounting principles generally accepted in the United States.

#### **Recent Accounting Pronouncements**

In November 2002, the Financial Accounting Standards Board (FASB) issued Financial Interpretation No. 45 (FIN 45), *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*. FIN 45 clarifies that a guarantor is required to recognize, at the inception of the guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. FIN 45 also requires enhanced and additional disclosures of guarantees in financial statements ending after December 15, 2002. As discussed in the footnotes to the financial statements, EMCORE has guaranteed a loan associated with its GELcore joint venture.

In January 2003, the FASB issued Interpretation No. 46, *Consolidation of Variable Interest Entities*. This interpretation defines when a business enterprise must consolidate a variable interest entity. This



interpretation applies immediately to variable interest entities created after January 31, 2003 and became effective for all other transactions as of July 1, 2003. However, in October 2003 the FASB permitted companies to defer the July 1, 2003 effective date to December 31, 2003, in whole or in part, and indicated that it would provide further clarification of this interpretation before December 31, 2003. The Company has determined that it is not reasonably probable that it will be required to consolidate or disclose information about a variable interest entity.

In April 2003, the FASB issued SFAS No. 149, *Amendment of Statement 133 on Derivative Instruments and Hedging Activities*. SFAS No. 149 amends and clarifies financial accounting and reporting for derivative instruments, including certain derivative instruments embedded in other contracts (collectively referred to as derivatives) and for hedging activities under SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*. The changes in SFAS No. 149 improve financial reporting by requiring that contracts with comparable characteristics be accounted for similarly. In particular, SFAS No. 149 (1) clarifies under what circumstances a contract with an initial net investment meets the characteristic of a derivative discussed in paragraph 6(b) of SFAS No. 133, (2) clarifies when a derivative contains a financing component, (3) amends the definition of an underlying to conform it to language used in FIN 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*, and (4) amends certain other existing pronouncements. Those changes will result in more consistent reporting of contracts as either derivatives or hybrid instruments. SFAS No. 149 is to be applied prospectively to contracts entered into or modified after June 30, 2003, with certain exceptions, and for hedging relationships designated after June 30, 2003. Adopting this statement did not have a material impact on the financial position, results of operations, or cash flows of EMCORE.

In May 2003, the FASB issued SFAS No. 150, *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*. SFAS No. 150 establishes standards for how an issuer classifies and measures in its statement of financial position certain financial instruments with characteristics of both liabilities and equity. It requires that an issuer classify a financial instrument that is within its scope as a liability (or an asset in some circumstances) because that financial instrument embodies an obligation of the issuer. SFAS No. 150 is effective for financial instruments entered into or modified after May 31, 2003, and otherwise is effective at the beginning of the first interim period beginning after June 15, 2003, except for mandatorily redeemable financial instruments of nonpublic entities. Adopting this statement did not have a material impact on the financial position, results of operations, or cash flows of EMCORE.

## Results of Operations

The following table sets forth the consolidated statements of operations data of EMCORE expressed as a percentage of total revenues for the fiscal years ended September 30, 2003, 2002 and 2001:

	<u>Fiscal Years Ended September 30,</u>		
	<u>2003</u>	<u>2002</u>	<u>2001</u>
<b>Statements of Operations Data:</b>			
Revenues	100.0%	100.0%	100.0%
Cost of revenues	<u>87.2%</u>	<u>100.7%</u>	<u>62.0%</u>
Gross profit (loss)	12.8%	(0.7)%	38.0%
Operating expenses:			
Selling, general and administrative	25.6%	32.2%	16.2%
Research and development	19.6%	46.7%	28.9%
Gain on debt extinguishment	(5.8)%	—	—
Goodwill amortization	—	—	0.6%
Impairment and restructuring	<u>—</u>	<u>41.8%</u>	<u>—</u>
Total operating expenses	<u>39.4%</u>	<u>120.7%</u>	<u>45.7%</u>
Operating loss	(26.6)%	(121.4)%	(7.7)%
Other (income) expense:			
Interest (income) expense, net	6.4%	7.0%	(1.1)%
Other income (expense)	—	16.4%	(8.6)%
Equity in net loss of unconsolidated affiliates	<u>1.1%</u>	<u>3.1%</u>	<u>6.7%</u>
Total other (income) expense	<u>7.5%</u>	<u>26.5%</u>	<u>(3.0)%</u>
Loss before cumulative effect of a change in accounting principle	(34.1)%	(147.9)%	(4.7)%
Cumulative effect of a change in accounting principle	<u>—</u>	<u>—</u>	<u>(2.0)%</u>
Net loss	<u>(34.1)%</u>	<u>(147.9)%</u>	<u>(6.7)%</u>

## Comparison of Fiscal Years Ended September 30, 2003 and 2002

**Revenue.** EMCORE's consolidated revenue increased \$25.3 million or 29% to \$113.1 million in fiscal 2003 from \$87.8 million in fiscal 2002. Higher revenue was primarily attributable to increased shipments of MOCVD systems and the Ortel acquisition, which contributed \$23.6 million since being acquired in January 2003. International sales accounted for 43% of revenues in fiscal 2003 and 33% of revenues in fiscal 2002.

Systems segment revenue increased \$16.8 million or 47% to \$52.7 million in fiscal 2003 from \$35.9 million in fiscal 2002. Systems segment sales represented 47% and 41% of EMCORE's total revenues in fiscal 2003 and 2002, respectively. The number of MOCVD production systems shipped during the year increased 59% to 27 systems in fiscal 2003 from 17 systems in fiscal 2002. The average selling price for MOCVD systems sold remained relatively flat at \$1.4 million in fiscal 2003 and 2002. Component and service revenue in fiscal 2003 of \$8.3 million increased 14% when compared to \$7.3 million recorded in the prior year. In fiscal 2004, EMCORE will report first quarter results for the systems segment as a discontinued operation due to the divestiture.

Components and subsystems segment revenue increased \$8.5 million or 16% to \$60.4 million in fiscal 2003 from \$51.9 million in fiscal 2002. Components and subsystems segment sales represented 53% and 59% of EMCORE's total revenues in fiscal 2003 and 2002, respectively. On a product line basis, sales of fiber optic components and subsystems devices increased \$23.6 million or 260%, photovoltaic products decreased \$5.4 million or 23% and electronic materials and devices decreased \$9.6 million or 50% from the prior year.

EMCORE's Fiber Optics product line supports our CATV, telecommunications, data and storage and Satcom target markets. Revenues from VCSEL die and chip products, packaged products that include



TOSA, ROSA and transceiver module level products were \$9.1 million for both fiscal 2003 and 2002. On a quarterly basis, fiscal 2003 digital fiber optic revenues were \$2.3 million, \$2.6 million, \$3.0 million and \$1.2 million. Sales of digital products represented 8% and 10% of EMCORE's total revenues in fiscal 2003 and 2002, respectively. In fiscal 2003, VCSEL die and chip sales prices on average decreased slightly due to increasing price competitiveness in the marketplace, however, an increase in the number of units shipped helped to maintain revenue levels. In the fourth quarter of fiscal 2003, the die and chip product line experienced cancellations of significant orders from certain customers due to a perceived quality problem that was clarified and resolved in October 2003. Also, during the fourth quarter of fiscal 2003, EMCORE experience product returns related to certain transceiver module products. The transceiver devices were later determined to be non-saleable because of design deficiencies and \$2.0 million of inventory costs associated with the products were written-off during the period. In September 2003, EMCORE received an \$11.0 million purchase order from Cisco Systems for a LX4 transceiver module product. In October 2003, EMCORE purchased Molex's 10G Ethernet transceiver business, which was primarily focused on LX4 Xenpak and X2 form factor products to help ensure deliverability of products to Cisco. As a result, fiscal 2004 first quarter digital revenues are expected to increase 150% sequentially and exceed \$3.0 million due to LX4 module sales and increased volumes of VCSEL-related product.

Fiber optic products acquired through the Ortel acquisition primarily consist of fiber optic transmitter and receiver CATV products, Satcom transmission links and PON and FTTx systems. On a quarterly basis, beginning with the second quarter, Ortel's revenues were \$7.1 million, \$8.2 million and \$8.2 million. Sales of Ortel's products represented 21% of EMCORE's total revenues in fiscal 2003. Recently, cable operators and traditional telephone service providers have been competing with each other to offer the lowest price for unlimited "triple play" (voice, data and video) communications through one cable. As the market leader in RF transmission over fiber for the cable industry, Ortel is enabling Multi-System Operators (MSO's) to offer "triple play" to meet the exploding demand for on-demand, high-speed interactive and other new services. In response to the "triple play" threat from MSOs, the Regional Bell operating companies (RBOCs) also plan to offer "triple play" service over new deployment of fiber-to-the-premise systems. These growing applications should increase demand for FTTx subsystems which are manufactured and marketed by our Ortel division.

Photovoltaic revenues include the sale of epi wafers, solar cells, covered interconnect solar cells (CICs) and solar panels. Fiscal 2003 photovoltaic revenues decreased to \$18.2 million from \$23.6 million in fiscal 2002. The annual decrease is attributable to prior period weakness in satellite infrastructure spending, delays in government program launch schedules, significant sales price erosion on solar products and the delay of two significant solar contracts which have since been awarded to EMCORE. On a quarterly basis, fiscal 2003 photovoltaic revenues were \$5.1 million, \$5.2 million, \$3.0 million and \$4.9 million. Photovoltaic sales fluctuate quarterly due to the timing of large solar panel shipments or completion of significant research contracts. Sales in the photovoltaic group represented 16% and 27% of EMCORE's total revenues in fiscal 2003 and 2002, respectively. The worldwide satellite industry has seen substantial improvement in late 2003, with awards increasing more than 300% from five in 2002 to 17 thus far in 2003. In addition, the industry has seen consolidation into more financially stable institutions. For example, Intelsat Ltd. has agreed to purchase the North American satellites of satellite maker and operator Loral Space & Communications Ltd. As a result, we are seeing progress toward the satellite industry developing into a communications backbone for video, voice and data.

Sales of electronic materials and devices, which include RF materials and MR sensors, decreased to \$9.6 million in fiscal 2003 from \$19.2 million in fiscal 2002 due to a significant decline in orders from Motorola. EMCORE broadened its relationship with Motorola by entering into an agreement to sell them two EMCORE MOCVD production systems, and to co-develop and transition into production certain RF materials. In light of the fact that Motorola has now developed the capacity to supply a portion of their needs internally and due to the delayed introduction of InGaP HBTs into GSM handsets, annual RF materials related revenues have decreased significantly. On a quarterly basis, fiscal 2003 revenues from electronic materials and devices were \$2.1 million, \$2.0 million, \$2.8 million and \$2.7 million. This market is highly competitive, raw materials are extremely expensive and average selling prices have been declining over the past several years. Annual revenues from our mature MR sensors product line

decreased \$0.7 million from the prior year as a result of the phase out of certain automotive models at General Motors. Our contract with General Motors expires in fiscal 2004.

Government contract revenue represents reimbursement by various U.S. Government entities to aid in the development of new technology. Revenue from government contracts increased \$1.9 million to \$5.2 million in fiscal 2003 from \$3.3 million in fiscal 2002. With increased government focus on energy conservation, national security and fiber optic communications, we expect revenues from government contracts to increase significantly in fiscal 2004.

*Gross Profit (Loss).* Gross profit increased \$15.1 million to \$14.5 million in fiscal 2003 from (\$0.6) million in fiscal 2002. Compared to the prior year, gross margins increased from (0.7%) to 12.8%. Gross profit increased for both the systems and components and subsystems segments. During the second quarter of fiscal 2002, EMCORE recorded a \$11.9 million inventory charge of which \$4.1 million was related to the systems segment and \$7.8 million was related to the components and subsystems segment. The inventory charge was for excess raw material and finished goods inventory that EMCORE believed it was carrying as a result of market conditions. As revenues increase, our margins are expected to increase as well since a significant portion of our facility costs are fixed, higher throughput results in lower costs per unit produced. Fiscal 2004 gross margins should also increase as product lines are transferred to contract manufacturers for high volume production and as management implements additional programs to improve manufacturing process yields. Management does expect gains in gross margins to be slightly offset by lower sales prices due to competitive pricing pressures.

Gross profit on systems segment revenues increased \$5.9 million or 58% to \$16.1 million in fiscal 2003 from \$10.2 million in fiscal 2002. Gross margins for this group also increased from 29% to 31%. Fluctuations in gross margins usually represent differences in pricing and product mix of MOCVD production systems sales. In addition, as mentioned above, a \$4.1 million inventory charge was recorded in fiscal 2002. On a quarterly basis, systems segment gross margins were 35%, 33%, 34% and 20%. The decrease in fourth quarter margins was the result of lower margin system sales and manufacturing costs associated with certain customer order cancellations. In fiscal 2004, EMCORE will report results for the systems segment as a discontinued operation due to the divestiture.

Gross profit on components and subsystems segment revenues improved to (\$1.6) million in fiscal 2003 from (\$10.9) million in fiscal 2002. Gross margins for this group also improved from (21%) to (3%). The most significant factor contributing to these negative gross margins is unabsorbed overhead costs associated with lower revenues. EMCORE has a significant amount of fixed expenses relating to capital equipment and manufacturing overhead in its facilities where components and subsystems segment products are manufactured. By December 2001, EMCORE's manufacturing facilities were expanded and placed into service with the anticipation of expanding market prospects. Lower than forecasted components and subsystems segment revenues caused these fixed expenses to be allocated across reduced production volumes, adversely affecting gross profit and margins. In addition, as mention above, a \$7.8 million inventory charge was recorded in fiscal 2002. During the fourth



quarter of fiscal 2003, EMCORE recorded approximately \$0.2 million in anticipated losses on certain long-term photovoltaic contracts. On a quarterly basis, components and subsystems segment gross margins were (28%), (5%), 4% and 7%. This quarterly improvement is associated with increased volumes, changes in product mix and less manufacturing inefficiencies associated with newer product introductions. With the expectation that fiscal 2004 components and subsystems segment revenues will increase 50% annually, we expect gross profit and margins to continue to improve.

*Sales, General and Administrative.* Sales, general and administrative expenses (SG&A) increased \$0.8 million or 3% to \$29.0 million in fiscal 2003 from \$28.2 million in fiscal 2002. As a percentage of revenue, SG&A decreased from 32% in fiscal 2002 to 26% in 2003. The Ortel acquisition added approximately \$5.0 million of SG&A in fiscal 2003. The offsetting decrease in SG&A was mostly due to benefits achieved from prior year restructuring efforts in the systems segment. Fiscal 2003 systems segment SG&A decreased 39% to \$9.5 million from \$15.5 million in fiscal 2002. This decrease was also due to additional corporate allocations being spread to the components and subsystems segment product lines as a result of the Ortel acquisition. Assuming no further non-recurring charges and acquisitions, management expects annual SG&A expenses in fiscal year 2004 to continue to decrease as a percentage of revenue.

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*Research and Development.* Research and development expenses (R&D) decreased \$18.8 million or 46% to \$22.2 million in fiscal 2003 from \$41.0 million in fiscal 2002. As a percentage of revenue, R&D decreased from 47% in fiscal 2002 to 20% in 2003. The Ortel acquisition added approximately \$4.2 million of R&D in fiscal 2003. The decrease in R&D was mostly due to the deferral or elimination of certain non-critical research and development projects and headcount reductions. Fiscal 2003 systems segment R&D decreased 55% to \$5.8 million from \$12.9 million in fiscal 2002. Fiscal 2003 components and subsystems segment R&D, including Ortel's results, decreased 42% to \$16.4 million from \$28.1 million in fiscal 2002. The decrease in components and subsystems segment R&D was primarily due to the photovoltaic product line. Our photovoltaic customers in a depressed satellite industry preferred to use previously qualified solar cells instead of newly developed more efficient product. However, in fiscal 2004, with the recent increase in satellite builds, management's increased focus to improve manufacturing yields and the encouraging prospects of terrestrial concentrators for our InGaP/GaAs/Ge triple junction solar cells, we expect photovoltaic R&D to increase in absolute dollars in fiscal 2004 but also continue to decrease as a percentage of revenues. For the fiber optic group, R&D is expected to remain constant at \$8.7 million in fiscal 2004. During fiscal 2003, this group incurred significant R&D on the development of the LX4 CWDM fiber optic communications transceiver module. LX4 product shipments commenced in October 2003 to Cisco Systems. In the first half of fiscal 2004, the fiber optic group is expected to complete the development of (a) SmartLink, a 10 Gb/s patent-protected media converter solution that uses fiber optics to extend the current copper socket throughout the data center or central office to up to 300 meters; (b) CX4, a product similar to LX4 except that it uses a copper cable connection instead of fiber optics; and (c) 10 Gb/s TOSAs and ROSAs packaged parts. Ortel's R&D is expected to be approximately \$6.5 million in fiscal 2004. Ortel's R&D focus is on the continued development of PONs, FTTC and FTTH systems that will provide even greater bandwidth, better performance and increased reliability to homes and businesses.

*Gain From Debt Extinguishment.* In December 2002, EMCORE purchased, in multiple transactions, \$13.2 million principal amount of the notes at prevailing market prices, for an aggregate of approximately \$6.3 million. As a result of the transaction, EMCORE recorded a gain of approximately \$6.6 million after netting unamortized debt issuance costs of approximately \$0.3 million.

*Impairment and Restructuring Charges.* In fiscal 2002, EMCORE recorded pre-tax charges to income totaling \$36.7 million, which included impairment charges of \$34.8 million, and restructuring charges of \$1.9 million.

Impairment charges: As discussed earlier in the critical accounting policies section, EMCORE recorded \$34.8 million of non-cash impairment charges related to its property and equipment in the second quarter of fiscal 2002. Of the impairment charges recorded, \$4.0 million related to EMCORE's systems segment and \$30.8 million related to the components and subsystems segment.

Restructuring charges: EMCORE's fiscal 2002 restructuring program consisted of a realignment of all engineering, manufacturing and sales/marketing operations, as well as workforce reductions. Included in the provision for impairment and restructuring charges were severance and fringe benefit charges of \$1.9 million related to employee termination costs. Of the severance charges recorded, \$1.1 million related to EMCORE's systems segment and \$0.8 million related to the components and subsystems segment. All monetary obligations relating to these charges were paid as of March 31, 2003.

*Interest Expense, net.* Interest expense, net increased \$1.1 million or 18% to \$7.2 million in fiscal 2003 from \$6.1 million in fiscal 2002. The increase is due to \$1.7 million less interest income earned primarily from lower interest rates available on our decreasing cash balance offset slightly by less interest expense of \$0.6 million due to a partial repurchase of outstanding debt.

*Other Expense.* In fiscal 2001, EMCORE recorded a net gain of \$10.0 million upon receipt of UTCI common stock in connection with the sale of a joint venture. In fiscal 2002, UTCI and its subsidiaries filed voluntary petitions for reorganization under Chapter 11 of the U.S. Bankruptcy Code. As a result, EMCORE wrote off its investment in UTCI totaling \$14.0 million in fiscal 2002.

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In fiscal 2002, EMCORE invested approximately \$0.4 million in Qusion, a Princeton, New Jersey start-up specializing in monolithic integration of optical components. Lacking additional funding, Qusion closed its business. EMCORE purchased all of Qusion's intellectual property and wrote off its entire investment.

*Equity in Net Loss of Unconsolidated Affiliates.* EMCORE's share of GELcore's net loss decreased \$1.5 million or 55% to \$1.2 million in fiscal 2003 from \$2.7 million in fiscal 2002. On a quarterly basis, EMCORE's share of GELcore's operating results was (\$0.6) million, (\$0.7) million, (\$33,000) and \$0.1 million. This quarterly improvement is associated with increased unit volumes, changes in LED product mix and less manufacturing inefficiencies associated with newer product introductions. Management believes GELcore's results will continue to improve in fiscal 2004 when compared to fiscal 2003.

*Income Taxes.* As a result of its losses, EMCORE did not incur any income tax expense in either fiscal 2003 or 2002. Management provides valuation allowances against the deferred tax asset for amounts which are considered "more likely than not" to be realized. As of September 30, 2003, EMCORE had net operating loss carryforwards for tax purposes of approximately \$365.0 million that expire in the years 2004 through 2023. In fiscal 2003, \$0.6 million of net operating loss carryforwards expired and approximately \$3.7 million are due to expire in fiscal 2004. EMCORE is incorporated in the State of New Jersey that presently has a moratorium on the use of net operating loss carryforwards due to state deficits encountered over the past two years.



## Comparison of Fiscal Years Ended September 30, 2002 and 2001

*Revenue.* EMCORE's consolidated revenue decreased \$96.8 million or 52% to \$87.8 million in fiscal 2002 from \$184.6 million in fiscal 2001. Tecstar, which was acquired mid-year in March 2002, contributed approximately \$10.3 million of revenue in fiscal 2002. Lower revenue was primarily attributable to a significant decreased in MOCVD system shipments. International sales accounted for 33% of revenues in fiscal 2002 and 48% of revenues in fiscal 2001.

Systems segment revenue decreased \$95.2 million or 73% to \$35.9 million in fiscal 2002 from \$131.1 million in fiscal 2001. Systems segment sales represented 41% and 71% of EMCORE's total revenues in fiscal 2002 and 2001, respectively. The number of MOCVD production systems shipped during the year decreased 81% to 17 systems in fiscal 2002 from 89 systems in fiscal 2001. The depressed economic climate reduced customer capital spending dramatically during fiscal 2002, particularly in the data and telecommunication sectors, where EMCORE has traditionally sold a significant portion of systems. Component and service revenue in fiscal 2002 of \$7.3 million decreased 19% when compared to \$9.0 million recorded in the prior year.

Components and subsystems segment revenue decreased \$1.6 million or 3% to \$51.9 million in fiscal 2002 from \$53.5 million in fiscal 2001. Components and subsystems segment sales represented 59% and 29% of EMCORE's total revenues in fiscal 2002 and 2001, respectively. On a product line basis, sales of fiber optic devices decreased \$4.5 million or 33%, photovoltaic products increased \$3.4 million or 17% and electronic materials and devices decreased \$0.5 million or 2% from the prior year.

Fiber optic revenues decreased to \$9.1 million in fiscal 2002 from \$13.6 million in fiscal 2001. On a quarterly basis, fiscal 2002 fiber optic revenues were \$1.3 million, \$2.4 million, \$2.6 million and \$2.8 million. Sales of fiber optic products represented 10% and 7% of EMCORE's total revenues in fiscal 2002 and 2001, respectively. In the second and third quarter of fiscal 2001, fiber optic quarterly revenues exceeded \$4.0 million. Beginning in the fourth quarter of fiscal 2001, the depressed economic climate, particularly in the data and telecommunication sectors, resulted in a significant reduction of customer orders.

Photovoltaic revenues include the sale of epi wafers, solar cells, CICs and solar panels. Fiscal 2002 photovoltaic revenues increased to \$23.6 million from \$20.2 million in fiscal 2001. The increase in annual revenue is attributable to the Tecstar acquisition. The annual decrease is attributable to a weakness in satellite infrastructure spending and delays in government program launch schedules. On a quarterly basis, fiscal 2002 photovoltaic revenues were \$1.8 million, \$10.9 million, \$3.1 million and \$7.8 million. Photovoltaic sales fluctuate quarterly due to the timing of large solar panel shipments or completion of

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significant research contracts. Sales in the photovoltaic group represented 27% and 11% of EMCORE's total revenues in fiscal 2002 and 2001, respectively.

Sales of electronic materials and devices, which include RF materials and MR sensors, decreased to \$19.2 million in fiscal 2002 from \$19.7 million in fiscal 2001. Motorola was the largest customer for the components and subsystems segment and revenues from Motorola represented approximately 13% of EMCORE's total fiscal 2002 revenues. During fiscal 2002, EMCORE broadened its relationship with Motorola by entering into an agreement to sell them two EMCORE MOCVD production systems, and to co-develop and transition into production certain RF materials. On a quarterly basis, fiscal 2002 revenues from electronic materials and devices were \$5.7 million, \$5.4 million, \$4.7 million and \$3.4 million. This market is highly competitive, raw materials are extremely expensive and average selling prices have been declining over the past several years. Annual revenues from our mature MR sensors product line decreased \$1.8 million from the prior year as a result of the phase out of certain automotive models at General Motors. Our contract with General Motors expires in fiscal 2004.

Government contract revenue represents reimbursement by various U.S. Government entities to aid in the development of new technology. Revenue from government contracts increased \$0.8 million to \$3.3 million in fiscal 2002 from \$2.5 million in fiscal 2001.

*Gross Profit (Loss).* Gross profit decreased \$70.7 million to (\$0.6) million in fiscal 2002 from \$70.1 million in fiscal 2001. Compared to the prior year, gross margins decreased from 38% to (1%). Gross profit decreased for both the systems and components and subsystems segments. During the second quarter of fiscal 2002, EMCORE recorded a \$11.9 million inventory charge of which \$4.1 million was related to the systems segment and \$7.8 million was related to the components and subsystems segment. The inventory charge was for excess raw material and finished goods inventory that EMCORE believed it was carrying as a result of market conditions. As revenues decreased, our margins decrease as well since a significant portion of our facility costs are fixed, lower throughput results in higher costs per unit produced.

Gross profit on systems segment revenues decreased \$48.2 million or 83% to \$10.2 million in fiscal 2002 from \$58.4 million in fiscal 2001. Gross margins for this group also decreased from 45% to 29%. On a quarterly basis, systems segment gross margins were 47%, (58%), 31% and 42%. Fluctuations in gross margins usually represent differences in pricing and product mix of MOCVD production systems sales. In addition, as mentioned above, a \$4.1 million inventory charge was recorded in the second quarter of fiscal 2002.

Gross profit on components and subsystems segment revenues declined to (\$10.9) million in fiscal 2002 from \$11.7 million in fiscal 2001. Gross margins for this group also declined from 22% to (21%). On a quarterly basis, components and subsystems segment gross margins were (27%), (35%), (5%) and (10%). The most significant factors contributing to this decrease in gross margin were: a) unabsorbed overhead costs associated with lower revenues due to customer delayed product launches; b) specific inventory write-down charges of \$7.7 million recorded in the second quarter of fiscal 2002; and c) higher than expected costs incurred integrating Tecstar's operations into EMCORE. During fiscal 2002, EMCORE developed significantly more photovoltaic and fiber optic devices and components than in fiscal 2001. The inventory charge was related to reserves for excess raw material and finished goods inventory that EMCORE believed it was carrying as a result of market conditions. EMCORE also has a significant amount of fixed expenses relating to capital equipment and manufacturing overhead in its facilities where components and subsystems segment products are manufactured. By December 2001, EMCORE's manufacturing facilities were expanded and placed into service with the anticipation of expanding market prospects. Lower than forecasted components and subsystems segment revenues caused these fixed expenses to be allocated across reduced production volumes, adversely affecting gross profit and margins.

*Sales, General and Administrative.* Sales, general and administrative expenses (SG&A) decreased \$1.6 million or 5% to \$28.2 million in fiscal 2002 from \$29.8 million in fiscal 2001. The decrease was primarily related to a \$0.9 million salary-related fiscal 2001 accrual reversed in fiscal 2002 and restructuring savings, involving headcount reduction and a cutback on marketing expenditures, offset slightly by a \$2.6 million additional reserve for doubtful accounts. As a percentage of revenue, SG&A increased from 16% in fiscal 2001 to 32% in 2002.

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**Research and Development.** Research and development expenses (R&D) decreased \$12.4 million or 23% to \$41.0 million in fiscal 2002 from \$53.4 million in fiscal 2001. The decrease in R&D was mostly due to the deferral or elimination of certain non-critical research and development projects in the component and subsystems product segment and headcount reductions. Fiscal 2002 components and subsystems segment R&D decreased \$13.5 million or 32% to \$28.1 million from \$41.6 million in fiscal 2001. As a percentage of revenue, R&D increased from 29% in fiscal 2001 to 47% in 2002.

**Impairment and Restructuring Charges.** As discussed earlier, in fiscal 2002, EMCORE recorded pre-tax charges to income totaling \$36.7 million, which included impairment charges of \$34.8 million, and restructuring charges of \$1.9 million.

**Interest Expense, net.** Interest expense, net increased \$8.1 million to \$6.1 million in fiscal 2002 from \$2.0 million of net interest income in fiscal 2001. The increase is due to \$2.5 million less interest income earned primarily from lower interest rates available on our decreasing cash balance in addition to an increase in interest expense of \$5.6 million related to outstanding debt.

**Other Expense.** In March 2001, a net gain of \$5.9 million was recorded related to the settlement of litigation. As previously discussed, in fiscal 2001, EMCORE recorded a net gain of \$10.0 million upon receipt of UTCI common stock. In fiscal 2002, EMCORE wrote off its investments in UTCI and Qusion totaling \$14.0 million and \$0.4 million, respectively.

**Equity in Net Loss of Unconsolidated Affiliates.** EMCORE's share of GELcore's net loss decreased \$2.2 million or 45% to \$2.7 million in fiscal 2002 from \$4.9 million in fiscal 2001. On a quarterly basis, EMCORE's share of GELcore's operating results was (\$0.4) million, (\$0.8) million, (\$0.8) million and (\$0.7) million.

**Income Taxes.** As a result of its losses, EMCORE did not incur any income tax expense in either fiscal 2002 or 2001. Management provides valuation allowances against the deferred tax asset for amounts which are considered "more likely than not" to be realized.

## Quarterly Results of Operations

The following tables present EMCORE's unaudited results of operations expressed in dollars and as a percentage of revenues for the eight most recently ended quarters. EMCORE believes that all necessary adjustments, consisting only of normal recurring adjustments, have been included in the amounts below to present fairly the selected quarterly information when read in conjunction with the consolidated financial statements and notes included elsewhere in this document. EMCORE's results from operations may vary substantially from quarter to quarter. Accordingly, the operating results for a quarter are not necessarily indicative of results for any subsequent quarter or for the full year. EMCORE has experienced and expects to continue to experience significant fluctuations in quarterly results. See Item 6. Selected Financial Data for a listing of certain significant transactions that affect the comparability of EMCORE's operating results and financial condition.

## Statements of Operations

	Dec. 31, 2001	Mar. 31, 2002	Jun. 30, 2002	Sept. 30, 2002	Dec. 31, 2002	Mar. 31, 2003	June 30, 2003	Sept. 30, 2003
	(in thousands)							
Revenues	\$ 19,137	\$ 23,078	\$ 20,275	\$ 25,282	\$23,246	\$ 27,674	\$32,180	\$ 30,006
Cost of revenues	16,592	32,208	17,748	21,866	21,020	24,923	26,405	26,241
Gross profit (loss)	2,545	(9,130)	2,527	3,416	2,226	2,751	5,775	3,765
<b>Operating expenses:</b>								
Selling, general and administrative	6,998	9,483	6,522	5,224	5,779	7,392	7,673	8,146
Research and development	11,947	11,625	9,398	8,000	3,606	5,428	5,480	7,667
Impairment and restructuring	—	35,939	—	782	—	—	—	—
Gain from debt extinguishment	—	—	—	—	(6,614)	—	—	—
Total operating expenses	18,945	57,047	15,920	14,006	2,771	12,820	13,153	15,813
Operating loss	(16,400)	(66,177)	(13,393)	(10,590)	(545)	(10,069)	(7,378)	(12,048)
Interest expense (income), net	928	1,682	1,761	1,736	1,781	1,741	1,821	1,914
Other (income) expense	13,262	—	—	1,126	—	—	—	—
Equity in net loss of unconsolidated affiliates	377	851	769	709	571	731	33	(107)
Total other expenses (income)	14,567	2,533	2,530	3,571	2,352	2,472	1,854	1,807
Net loss	<u>\$(30,967)</u>	<u>\$(68,710)</u>	<u>\$(15,923)</u>	<u>\$(14,161)</u>	<u>\$(2,897)</u>	<u>\$(12,541)</u>	<u>\$(9,232)</u>	<u>\$(13,855)</u>
	Dec. 31, 2001	Mar. 31, 2002	Jun. 30, 2002	Sept. 30, 2002	Dec. 31, 2002	Mar. 31, 2003	June 30, 2003	Sept. 30, 2003
	(as a percentage of revenues)							
Revenues	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues	86.7	139.5	87.5	86.5	90.4	90.1	82.1	87.5
Gross profit (loss)	13.3	(39.5)	12.5	13.5	9.6	9.9	17.9	12.5
<b>Operating expenses:</b>								
Selling, general and administrative	36.6	41.1	32.2	20.7	24.9	26.7	23.8	27.1
Research and development	62.4	50.4	46.3	31.6	15.5	19.6	17.0	25.6
Impairment and restructuring	—	155.7	—	3.1	—	—	—	—
Gain from debt extinguishment	—	—	—	—	(28.5)	—	—	—
Total operating expenses	99.0	247.2	78.5	55.4	11.9	46.3	40.8	52.7
Operating loss	(85.7)	(286.7)	(66.0)	(41.9)	(2.3)	(36.4)	(22.9)	(40.2)
Interest expense (income), net	4.8	7.3	8.7	6.9	7.7	6.3	5.7	6.4
Other (income) expense	69.3	—	—	4.4	—	—	—	—
Equity in net loss of unconsolidated affiliates	2.0	3.7	3.8	2.8	2.5	2.6	0.1	(0.4)
Total other expenses (income)	76.1	11.0	12.5	14.1	10.2	8.9	5.8	6.0
Net loss	<u>(161.8)%</u>	<u>(297.7)%</u>	<u>(78.5)%</u>	<u>(56.0)%</u>	<u>(12.5)%</u>	<u>(45.3)%</u>	<u>(28.7)%</u>	<u>(46.2)%</u>



## Liquidity and Capital Resources

### *Working Capital*

EMCORE has funded operations to date through product sales, sales of equity, subordinated debt and borrowings under revolving credit facilities. Significant financial transactions include the following:

- In March 2000, EMCORE raised approximately \$127.5 million from an additional equity offering;
- In May 2001, EMCORE issued \$175.0 million of 5% convertible subordinated notes;

At September 30, 2003, EMCORE had working capital of approximately \$55.5 million. Working capital at September 30, 2002 was \$111.8 million. Cash, cash equivalents and marketable securities at September 30, 2003 totaled \$28.4 million, which reflects net cash usage of \$55.7 million for fiscal 2003. The following five items accounted for \$46.1 million of the cash usage:

- \$26.5 million – Acquisitions: ORTEL Corporation and Alvesta Corporation
- \$ 6.3 million – Repurchase of convertible subordinated notes
- \$ 8.5 million – Semi-annual interest payment on convertible subordinated notes
- \$ 2.0 million – Investment into GELcore joint venture
- \$ 2.8 million – Purchases of capital equipment

On November 3, 2003, EMCORE sold its TurboDisc systems business to Veeco in a transaction that could be valued at up to \$80.0 million. The purchase price was \$60.0 million in cash at closing with an additional aggregate maximum payout of \$20.0 million over the next two years. EMCORE will receive in cash 50% of all revenues from this business that exceeds \$40.0 million in each of the next two years, beginning January 1, 2004. Revenues for the systems business in fiscal 2003 were approximately \$52.7 million, down from a peak of \$131.1 million in fiscal 2001. This transaction included the assets, products, product warranty liabilities, hardware-related technology and intellectual property used primarily in the operation of this business, including its facilities located in Somerset, New Jersey. As a result of this transaction, working capital on November 3, 2003 increased by approximately \$43.0 million.

### *Cash Flow*

**Net Cash Used For Operations** — Net cash used for operations improved \$15.0 million or 45% to (\$18.6) million in fiscal 2003 from (\$33.6) million in fiscal 2002. Included in EMCORE's fiscal 2003 net loss of \$38.5 million were non-cash items of \$19.3 million in depreciation and amortization expenses, \$6.6 million related to the gain from partial debt extinguishment and \$1.2 million equity loss in the GELcore joint venture. Increases in cash flow from changes in balance sheet accounts totaled \$2.8 million in fiscal 2003 and \$9.7 million in fiscal 2002. Significant fluctuations on the balance sheet included increased receivables of \$3.5 million, an inventory decrease of \$12.5 million and a decrease in customer deposits of \$5.0 million. During fiscal 2002, EMCORE proceeded with a restructuring program, consisting of the realignment of all engineering, manufacturing and sales/marketing operations, as well as workforce reductions. This restructuring, in conjunction with an expected increase in components and subsystems segment revenues, should enable EMCORE to achieve positive cash flow from operations in the second half of fiscal 2004. Actual results may differ from this target for a number of reasons as we have already discussed.

**Net Cash Provided by Investment Activities** — Net cash provided by investment activities improved \$10.9 million to \$10.3 million in fiscal 2003 from (\$0.6) million in fiscal 2002. Changes in cash flow consisted of:

- **Capital expenditures** — Capital expenditures decreased \$3.4 million or 55% to \$2.8 million in fiscal 2003 from \$6.2 million in fiscal 2002. As part of our ongoing effort to manage cash, management carefully scrutinizes all significant capital purchases. Exclusive of facility consolidation efforts, EMCORE estimates fiscal 2004 capital expenditures to increase modestly as management focuses on purchasing equipment that will provide higher target yields for manufactured product.

**Acquisitions** — From time to time, EMCORE evaluates potential acquisitions of complementary businesses as strategic opportunities and anticipates continuing to make such evaluations. In fiscal 2003,

EMCORE purchased Ortel for \$26.2 million in cash and acquired certain assets of privately held Alvesta Corporation for approximately \$250,000. In fiscal 2002, EMCORE acquired certain assets of Tecstar for \$25.1 million in cash. As discussed above, in October 2003, EMCORE recently purchased Molex's 10G Ethernet transceiver business, which was primarily focused on LX4 Xenpak and X2 form factor products for an initial \$1.0 million in cash and an additional \$1.5 million in progress payments expected to be paid during fiscal 2004.

**Investments** — Investments in GELcore totaled approximately \$2.0 million in fiscal 2003 and 2002. As noted above, GELcore has improved operations and recently reported profitable quarterly results. EMCORE does not expect to contribute additional cash to fund normal operations of GELcore. In February 2002, EMCORE purchased \$1.0 million of preferred stock of Archcom Technology, Inc., a venture-funded, start-up optical networking components company that designs, manufactures, and markets a series of high performance lasers and photodiodes for datacom and telecom industries.

**Repayment of loan** — In November 2001, EMCORE received payment from UTCI of \$5.0 million for a related party loan made in August 2001.

**Marketable securities** — In fiscal 2003, EMCORE's depleted its investment in marketable securities by \$41.5 million in order to fund multiple acquisitions, partially repurchase debt and pay interest expense on the remaining debt.

**Net Cash Used For Financing Activities** — Net cash used for financing activities increased \$11.6 million to \$5.9 million in fiscal 2003 from (\$5.7) million in fiscal 2002. In fiscal 2003, \$6.3 million related to the partial repurchase of our convertible subordinated notes. In fiscal 2002, \$4.2 million related to proceeds received from the exercise of common stock warrants.

### *Financing Transactions*



In May 2001, EMCORE issued \$175.0 million aggregate principal amount of its 5% convertible subordinated notes due in May 2006. Net proceeds received by EMCORE, after costs of issuance, were approximately \$168.8 million. Interest is payable in arrears semiannually on May 15 and November 15 of each year, which began on November 15, 2001. The notes are convertible into EMCORE common stock at a conversion price of \$48.76 per share, subject to certain adjustments, at the option of the holder. The notes may be redeemed at EMCORE's option, on or after May 20, 2004 at specific redemption prices. There are no financial covenants related to these notes. For the years ended September 30, 2003, 2002 and 2001, interest expense relating to the notes approximated \$8.3 million, \$8.8 million and \$3.5 million, respectively.

In May 2002, the Board of Directors authorized EMCORE from time to time to repurchase a portion of the notes in one or more open market transactions, in accordance with certain guidelines. In December 2002, EMCORE purchased, in multiple transactions, \$13.2 million principal amount of the notes at prevailing market prices, for an aggregate purchase price of approximately \$6.3 million. As a result of the transaction, EMCORE recorded a gain from operations of approximately \$6.6 million after netting unamortized debt issuance costs of approximately \$0.3 million. As a result of the partial debt repurchase, annual interest expense in future periods has been decreased by approximately \$650,000. EMCORE may continue to repurchase notes through various means, including but not limited to one or more open market or privately negotiated transactions in future periods. The timing and amount of repurchase, if any, whether de minimis or material, will depend on many factors, including but not limited to, the availability of capital, the prevailing market price of the convertible notes and overall market conditions.

On December 24, 2003, EMCORE filed a Form S-4 Registration Statement under the Securities Act of 1933 pursuant to which EMCORE may offer to exchange new 5% convertible senior subordinated notes due May 15, 2011 and common stock for our existing 5% convertible subordinated notes due May 15, 2006. Interest would be payable on the new notes at a rate of 5% per year, payable in cash semi-annually on May 15 and November 15 of each year. The new notes would be convertible at any time prior to maturity.

In fiscal 2000, GELcore entered into a Revolving Loan Agreement (the "GELcore Credit Facility") with General Electric Canada, Inc., an affiliate of GE, which is the owner of a 51% controlling share of

GELcore. The GELcore Credit Facility provides for borrowings of up to Canadian \$7.5 million (U.S. \$5.6 million at September 30, 2003) at a rate of interest based on prevailing Canadian interest rates. Amounts outstanding under the GELcore Credit Facility are payable on demand. GELcore's Credit Facility expired in August 2003 however GELcore is in the process of extending this credit facility and expects completion by December 31, 2003. EMCORE has guaranteed 49% (i.e., its proportionate share) of GELcore's obligations under the GELcore Credit Facility. As of September 30, 2003, EMCORE's share of this obligation was \$0.7 million. If GELcore's cash generated from operations and cash on hand are not sufficient to repay the amount outstanding under the facility, EMCORE would be required to make the necessary pro rata payment as outlined above.

As of September 30, 2003, EMCORE had remaining 2.0 million shares of common stock available on a filed shelf registration statement previously declared effective by the SEC.

*Contractual Obligations*

EMCORE's contractual obligations over the next five years are summarized in the table below:

As of September 30, 2003 (in millions)	Total	Less than 1 Year (fiscal 2004)	1 - 3 Years (fiscal 2005- 2007)	4 - 5 Years (fiscal 2008-2009)	After 5 Years
Long-Term Debt <sup>(1)</sup>	\$161.8	\$ —	\$161.8	\$ —	\$ —
Capital Lease Obligations	0.1	0.1	—	—	—
Operating Leases	10.4	2.1	4.5	1.0	2.8
Total Contractual Cash Obligations	<u>\$172.3</u>	<u>\$2.2</u>	<u>\$166.3</u>	<u>\$1.0</u>	<u>\$2.8</u>

(1) Due in May 2006.  
In December 2002, EMCORE repurchased \$13.2 million of convertible subordinated notes.  
At December 2003, total long-term debt outstanding was \$161.8 million.

EMCORE does not have any purchase obligations or any other long-term liabilities other than those listed in the table above.

*Conclusion*

EMCORE believes that its current liquidity should be sufficient to meet its cash needs for working capital through fiscal year 2004. However, if cash generated from operations and cash on hand are not sufficient to satisfy EMCORE's liquidity requirements, EMCORE will seek to obtain additional equity or debt financing. Additional funding may not be available when needed or on terms acceptable to EMCORE. If EMCORE is required to raise additional financing and if adequate funds are not available or not available on acceptable terms, the ability to continue to fund expansion, develop and enhance products and services, or otherwise respond to competitive pressures may be severely limited. Such a limitation could have a material adverse effect on EMCORE's business, financial condition, results of operations and cash flow.

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

Although EMCORE occasionally enters into transactions denominated in foreign currencies, the total amount of such transactions is not material. Accordingly, fluctuations in foreign currency values would not have a material adverse effect on our future financial condition or results of operations.

As of September 30, 2003, EMCORE no longer held investments in marketable debt securities.

**Item 8. Financial Statements and Supplementary Data**

**EMCORE CORPORATION**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
**For the years ended September 30, 2003, 2002 and 2001**  
(in thousands, except per share data)



	2003	2002	2001
Revenues:			
Systems	\$ 52,681	\$ 35,878	\$131,141
Components and subsystems	60,425	51,894	53,473
Total revenues	113,106	87,772	184,614
Cost of revenues:			
Systems	36,545	25,650	72,725
Components and subsystems	62,044	62,764	41,784
Total cost of revenues	98,589	88,414	114,509
Gross profit (loss)	14,517	(642)	70,105
Operating expenses:			
Selling, general and administrative	28,990	28,227	29,851
Goodwill amortization	—	—	1,147
Research and development	22,181	40,970	53,391
Gain from debt extinguishment	(6,614)	—	—
Impairment and restructuring	—	36,721	—
Total operating expenses	44,557	105,918	84,389
Operating loss	(30,040)	(106,560)	(14,284)
Other (income) expense:			
Interest income	(1,031)	(2,749)	(5,288)
Interest expense	8,288	8,856	3,240
Other (income) expense	—	14,388	(15,920)
Equity in net loss of unconsolidated affiliates	1,228	2,706	12,326
Total other (income) expenses	8,485	23,201	(5,642)
Loss before cumulative effect of a change in accounting principle	(38,525)	(129,761)	(8,642)
Cumulative effect of a change in accounting principle	—	—	(3,646)
Net loss	<u><u>\$ (38,525)</u></u>	<u><u>\$ (129,761)</u></u>	<u><u>\$ (12,288)</u></u>
<b>Per share data:</b>			
Weighted average basic and diluted shares outstanding used in per share data calculations	36,999	36,539	34,438
Loss per basic and diluted share before cumulative effect of a change in accounting principle	<u><u>\$ (1.04)</u></u>	<u><u>\$ (3.55)</u></u>	<u><u>\$ (0.25)</u></u>
Net loss per basic and diluted share	<u><u>\$ (1.04)</u></u>	<u><u>\$ (3.55)</u></u>	<u><u>\$ (0.36)</u></u>

The accompanying notes are an integral part of these consolidated financial statements.

**EMCORE CORPORATION**  
**CONSOLIDATED BALANCE SHEETS**  
**As of September 30, 2003 and 2002**  
**(in thousands)**

ASSETS	2003	2002
Current assets:		
Cash and cash equivalents	\$ 28,439	\$ 42,716
Marketable securities	—	41,465
Accounts receivable, net of allowance for doubtful accounts of \$1,695 and \$3,347 at September 30, 2003 and 2002, respectively	25,595	23,817
Accounts receivable - related parties	325	518
Inventories, net	25,106	31,027
Prepaid expenses and other current assets	1,954	1,188
Total current assets	81,419	140,731
Property, plant and equipment, net	95,809	101,302
Goodwill	30,366	20,384
Intangible assets, net	5,401	3,042
Investments in unconsolidated affiliate	9,214	8,482
Other assets, net	10,230	12,002
Total assets	<u><u>\$ 232,439</u></u>	<u><u>\$ 285,943</u></u>
<b>LIABILITIES and SHAREHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 11,968	\$ 10,346
Accrued expenses	13,269	12,875
Customer deposits	587	5,604
Capitalized lease obligation – current	52	81
Total current liabilities	25,876	28,906
Convertible subordinated notes	161,750	175,000
Capitalized lease obligation, net of current portion	41	87
Total liabilities	187,667	203,993
Commitments and contingencies		
Shareholders' equity:		



Preferred stock, \$0.0001 par, 5,882 shares authorized, no shares outstanding.	—	—
Common stock, no par value, 100,000 shares authorized, 37,327 shares issued and 37,307 outstanding at September 30, 2003; 36,772 shares issued and 36,752 outstanding at September 30, 2002	335,266	334,051
Accumulated deficit	(289,438)	(250,913)
Accumulated other comprehensive loss	(90)	(222)
Shareholders' notes receivable	(34)	(34)
Treasury stock, at cost; 20 shares at September 30, 2003 and 2002	(932)	(932)
Total shareholders' equity	<u>44,772</u>	<u>81,950</u>
Total liabilities and shareholders' equity	<u>\$ 232,439</u>	<u>\$ 285,943</u>

The accompanying notes are an integral part of these consolidated financial statements.

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**EMCORE CORPORATION**  
**CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY**

**For the years ended September 30, 2003, 2002 and 2001**

**(in thousands)**

	<u>Shares</u>	<u>Common Stock</u>	<u>Accumulated Deficit</u>	<u>Accumulated Other Comprehensive Income (Loss)</u>	<u>Shareholders' Notes Receivable</u>	<u>Treasury Stock</u>	<u>Total Shareholders' Equity</u>
Balance at September 30, 2000.	33,972	\$314,780	\$(108,864)	\$ 5	\$(6,360)	\$(239)	\$ 199,322
Net loss			(12,288)				(12,288)
Unrealized gain on marketable securities				(8,085)			(8,085)
Translation adjustment				(234)			(234)
Comprehensive loss							(20,607)
Issuance of common stock in connection with acquisitions	41	1,840					1,840
Stock option exercise	438	3,248					3,248
Stock purchase warrant exercise	1,111	5,509					5,509
Compensatory stock issuances	34	1,505					1,505
Issuance of common stock – Employee Stock Purchase Plan	17	677					677
Treasury stock	(16)					(693)	(693)
Redemptions of shareholders' notes receivable					6,326		6,326
Balance at September 30, 2001	<u>35,597</u>	<u>327,559</u>	<u>(121,152)</u>	<u>(8,314)</u>	<u>(34)</u>	<u>(932)</u>	<u>197,127</u>
Net loss			(129,761)				(129,761)
Impairment of equity investment charged to expense				8,421			8,421
Unrealized loss on marketable securities				(308)			(308)
Translation adjustment				(21)			(21)
Comprehensive loss							(121,669)
Stock option exercise	159	1,023					1,023
Stock purchase warrant exercise	823	4,194					4,194
Compensatory stock issuances	125	714					714
Issuance of common stock – Employee Stock Purchase Plan	48	561					561
Balance at September 30, 2002	<u>36,752</u>	<u>334,051</u>	<u>(250,913)</u>	<u>(222)</u>	<u>(34)</u>	<u>(932)</u>	<u>81,950</u>
Net loss			(38,525)				(38,525)
Unrealized loss on marketable securities				(37)			(37)
Translation adjustment				169			169
Comprehensive loss							(38,393)
Stock option exercise	157	285					285
Compensatory stock issuances	309	759					759
Issuance of common stock – Employee Stock Purchase Plan	89	171					171
Balance at September 30, 2003	<u>37,307</u>	<u>\$335,266</u>	<u>\$(289,438)</u>	<u>\$ (90)</u>	<u>\$ (34)</u>	<u>\$(932)</u>	<u>\$ 44,772</u>

The accompanying notes are an integral part of these consolidated financial statements.

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**EMCORE CORPORATION**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

**For the years ended September 30, 2003, 2002 and 2001**

**(in thousands)**

	<u>2003</u>	<u>2002</u>	<u>2001</u>
Cash flows from operating activities:			
Net loss	\$ (38,525)	\$ (129,761)	\$ (12,288)



Adjustments to reconcile net loss to net cash used for operating activities			
Loss on disposal of property, equipment and other impairment charges	—	48,649	—
Cumulative effect of a change in accounting principle	—	—	3,646
Recognition of loss on marketable securities	—	14,389	—
Gain from debt extinguishment	(6,614)	—	—
Depreciation and amortization	19,340	16,902	17,419
Provision for doubtful accounts	1,713	3,086	370
Gain on sale of unconsolidated affiliate	—	—	(10,000)
Deferred gain on sales to unconsolidated affiliate	—	—	(1,560)
Equity in net loss of unconsolidated affiliates	1,228	2,706	12,326
Compensatory stock issuance	759	714	858
Reduction of note receivable due for services received	706	—	—
Change in assets and liabilities:			
Accounts receivable – trade	(3,491)	3,992	(13,952)
Accounts receivable – related parties	193	1,643	174
Inventories	12,450	4,300	(16,966)
Prepaid expenses and other current assets	(766)	3,259	(2,631)
Other assets	(642)	765	(8,137)
Accounts payable	1,622	(3,728)	(2,475)
Accrued expenses	(1,706)	(2,395)	7,087
Customer deposits	(5,017)	1,889	(20,211)
Other	169	(21)	(234)
Total adjustments	<u>19,944</u>	<u>96,150</u>	<u>(34,286)</u>
Net cash and cash equivalents used for operating activities	<u>(18,581)</u>	<u>(33,611)</u>	<u>(46,574)</u>
Cash flows from investing activities:			
Purchase of property, plant, and equipment	(2,763)	(6,249)	(89,324)
Cash purchase of business, net of cash acquired	(26,450)	(25,084)	(1,707)
Investments in marketable securities, net	41,428	28,682	(19,654)
Investment in associated company	—	(1,000)	—
Investments in unconsolidated affiliates	(1,960)	(1,960)	(6,302)
Repayment of related party loan	—	5,000	—
Net cash and cash equivalents provided by (used for) investing activities	<u>10,255</u>	<u>(611)</u>	<u>(116,987)</u>
Cash flows from financing activities:			
Proceeds from convertible subordinated notes, net of issuance cost of \$6,199	—	—	168,801
Proceeds from exercise of stock purchase warrants	—	4,194	5,509
Reduction of convertible debt obligation	(6,317)	—	—
Proceeds from exercise of stock options	285	1,023	3,248
Payments on capital lease obligations	(90)	(79)	(44)
Proceeds from employee stock purchase plan	171	561	677
Proceeds from shareholders' notes receivable	—	—	5,760
Net cash and cash equivalents (used for) provided by financing activities	<u>(5,951)</u>	<u>5,699</u>	<u>183,951</u>
Net (decrease) increase in cash and cash equivalents	<u>(14,277)</u>	<u>(28,523)</u>	<u>20,390</u>
Cash and cash equivalents, beginning of year	<u>42,716</u>	<u>71,239</u>	<u>50,849</u>
Cash and cash equivalents, end of year	<u>\$ 28,439</u>	<u>\$ 42,716</u>	<u>\$ 71,239</u>

The accompanying notes are an integral part of these consolidated financial statements.

**EMCORE CORPORATION**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS—continued**  
**For the years ended September 30, 2003, 2002 and 2001**  
**(in thousands)**

	<u>2003</u>	<u>2002</u>	<u>2001</u>
Supplemental disclosures of cash flow information:			
Cash paid for interest	\$8,498	\$8,958	\$ 29
Non-cash Investing and Financing Activities:			
Treasury stock received for redemption of shareholders' notes receivable	—	—	693
Issuance of non-qualified stock options to equity investee	—	—	649
Proceeds from sale of joint venture in form of marketable securities	—	—	(13,958)
Issuance of common stock in connection with an acquisition	—	—	1,840

The Company purchased its Ortel Division for \$26.2 million, and certain assets of Tecstar for approximately \$25.1 million. In conjunction with these acquisitions, liabilities were assumed as follows:

Fair value of assets acquired	\$28,300	\$25,084	\$—
Cash paid for the net assets	<u>26,200</u>	<u>25,084</u>	<u>—</u>
Liabilities assumed	<u>\$ 2,100</u>	<u>\$ —</u>	<u>\$ —</u>

Reference is made to footnote 8 – Debt Facilities – for disclosure relating to certain non-cash warrant issuance.



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## EMCORE Corporation

### Notes to Consolidated Financial Statements

As of September 30, 2003 and 2002 and  
for the years ended September 30, 2003, 2002 and 2001

#### NOTE 1. Description of Business

EMCORE Corporation, a New Jersey corporation established in 1984, offers a versatile portfolio of compound semiconductor-based components and subsystems for the rapidly expanding broadband and wireless communication markets and the solid-state lighting industry. EMCORE continues to expand its comprehensive product portfolio to enable the transport of voice, data and video over copper, hybrid fiber/coax (HFC), fiber, satellite and wireless communication networks. The company is building upon its leading-edge compound semiconductor materials and device expertise to provide cost-effective components and subsystems for the CATV, telecom, data and storage, satellite and wireless communications markets. EMCORE supports these end markets through its EMCORE Fiber Optics, EMCORE Photovoltaics, and EMCORE Electronic Materials and Devices product lines. Through its 49% ownership participation in GELcore, LLC, EMCORE plays a vital role in developing and commercializing next-generation LED technology for use in the general illumination market.

On November 3, 2003, pursuant to approval received by the Board of Directors on October 31, 2003, EMCORE sold its TurboDisc systems business to a subsidiary of Veeco Instruments Inc. (Veeco) in a transaction that could be valued at up to \$80.0 million. The purchase price was \$60.0 million in cash at closing with an additional aggregate maximum payout of \$20.0 million over the next two years. EMCORE will receive in cash 50% of all revenues from this business that exceeds \$40.0 million in each of the next two years, beginning January 1, 2004. Revenues for the systems business in fiscal 2003 were approximately \$52.7 million, down from a peak of \$131.1 million in fiscal 2001. This transaction included the assets, products, product warranty liabilities, hardware-related technology and intellectual property used primarily in the operation of this business, including its facilities located in Somerset, New Jersey. Approximately 150 employees of EMCORE were involved in the TurboDisc business of which approximately 120 became employees of Veeco. In fiscal 2004, EMCORE will report first quarter results of the systems segment as a discontinued operation due to the divestiture.

#### NOTE 2. Summary of Significant Accounting Policies

*Principles of Consolidation.* The consolidated financial statements include the accounts of EMCORE and its wholly owned subsidiaries. The equity method of accounting is used for unconsolidated affiliates where EMCORE exercises significant influence, generally when ownership is at least 20% and not more than 50%. All intercompany accounts and transactions are eliminated upon consolidation. Prior period balances have been reclassified to conform to the current period financial statement presentation.

*Cash and Cash Equivalents.* EMCORE considers all highly liquid short-term investments purchased with an original maturity of three months or less to be cash equivalents.

*Marketable Securities.* EMCORE accounts for its investment in marketable securities as available-for-sale securities in accordance with the provisions of statement of Financial Accounting Standards (SFAS) No. 115, *Accounting for Certain Investments in Debt and Equity Securities*. Unrealized gains and losses for these securities are excluded from earnings and reported as a separate component of shareholders' equity. Realized gains and losses on sales of investments, as determined on a specific identification basis, are included in the consolidated statement of operations. Fair values are determined by reference to market prices for securities as quoted based on publicly traded exchanges. The fair value of the debt securities approximated cost. Declines in values that are deemed to be other than temporary in accordance with SFAS No. 115 are recorded as a component of other (income) expense on the statement of operations. EMCORE recorded approximately \$0.1 million, \$0.2 million and \$0.1 million of net realized gains on sales of available-for-sale debt securities during fiscal 2003, 2002 and 2001, respectively.

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*Concentration of Credit Risk.* Financial instruments, which may subject EMCORE to a concentration of credit risk, consist primarily of cash and cash equivalents, marketable securities and accounts receivable. EMCORE's cash and cash equivalents consist primarily of money market funds. EMCORE has maintained cash balances with certain financial institutions in excess of the \$100,000 insured limit of the Federal Deposit Insurance Corporation. EMCORE performs ongoing credit evaluations of its customers' financial condition and generally requires no collateral from its customers.

*Accounts Receivable.* EMCORE regularly evaluates its accounts receivable and accordingly maintains allowances for doubtful accounts for estimated losses resulting from the inability of our customers to meet their financial obligation to us. If the financial condition of our customers were to deteriorate, additional allowances may be required.

*Fair Value of Financial Instruments.* The carrying amounts of cash and cash equivalents, account receivables and payables and accrued expenses approximate fair value because of the short maturity of these instruments. The carrying amount of long-term receivables approximates fair value, as the effective rates for these instruments are comparable to market rates at year-end. The carrying amount of marketable securities and investments approximates fair market value. As of September 30, 2003 and 2002, the fair market value of the convertible subordinated debenture approximated \$129.4 million and \$81 million, respectively. This fair value was estimated based on the quoted market prices for the same or similar debt issuance.

*Inventories.* Inventories are stated at the lower of cost or market with cost being determined using the first-in, first-out (FIFO) method. We evaluate our ending inventories on a quarterly basis for excess quantities, impairment of value and obsolescence. This evaluation includes analysis of sales levels by product and projections of future demand based upon information received from our customers, sales team and management estimates. If inventories on hand are in excess of demand, or if they are greater than 12-months old, appropriate reserves are provided. Remaining inventory balances are adjusted to approximate the lower of our manufacturing



cost or market value. If future demand or market conditions are less favorable than our estimates, additional inventory write-downs may be required.

**Property, Plant and Equipment.** Property, plant and equipment are stated at cost. Significant improvements and betterments are capitalized if they extend the useful life of the asset. Routine maintenance and repairs are expensed when incurred. Plant and equipment are depreciated using the straight-line method over the estimated useful lives of the applicable assets, which range from three to forty years. Leasehold improvements are amortized using the straight-line method over the term of the related leases or the estimated useful lives of the improvements, whichever is less. Depreciation expense includes the amortization of capital leased assets.

**Goodwill.** All goodwill relates to EMCORE's components and subsystems business. In June 2001, SFAS No. 142, *Goodwill and Other Intangible Assets*, was approved by the Financial Accounting Standards Board (FASB). Amortization of goodwill, including goodwill recorded in past business combinations and indefinite lived intangible assets, would cease upon adoption of this statement. EMCORE adopted SFAS No. 142 on October 1, 2001 and completed its transition test for impairment during the quarter ended March 31, 2002. No impairment adjustment was deemed necessary by management. Had SFAS No. 142 been in effect for the year ended September 30, 2001, EMCORE's net loss would have decreased by \$1.1 million or \$0.03 per share.

**Valuation of long-lived assets and intangible assets.** EMCORE reviews long-lived assets and intangible assets on an annual basis or whenever events or changes in circumstances suggest that they may be impaired. A long-lived asset is considered impaired when its anticipated undiscounted cash flow is less than its carrying value. In making this determination, EMCORE uses certain assumptions, including, but not limited to: (a) estimates of the fair market value of these assets, and (b) estimates of future cash flows expected to be generated by these assets, which are based on additional assumptions such as asset utilization, length of service that assets will be used in our operations and estimated salvage values. See Footnote 5. Restructuring and Impairment Charges.

**Other Assets.** Included in other assets are various deferred costs, related party receivables and an investment. The deferred costs are primarily related to financing costs associated with the May 2001

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issuance of \$175.0 million convertible subordinated notes due in 2006. These financing costs are being amortized on a straight-line basis over the five-year life of the notes. Total capitalized financing costs, net of amortization, were \$3.0 million and \$4.4 million at September 30, 2003 and 2002, respectively. Total amortization expense related to these financing costs amounted to approximately \$1.0 million, \$1.3 million and \$0.5 million for the years ended September 30, 2003, 2002 and 2001 respectively. Related party receivables at September 30, 2003 primarily consisted of a \$3.4 million loan and accrued interest due from the Chief Executive Officer issued in fiscal 2001. Also included in other assets is a \$2.5 million six-year promissory note due from ASI/TSI issued in fiscal 2002; see footnote 13.

**Accruals for Liabilities and Warranties.** EMCORE may incur costs for which we have not been billed. These costs can include legal and accounting fees, costs pertaining to our self-funded medical insurance, warranty costs and other expenses. EMCORE makes estimates for these costs using historical data or information gained directly from the service providers. Total warranty expense amounted to approximately \$2.2 million, \$2.3 million and \$1.0 million for the years ended September 30, 2003, 2002 and 2001, respectively.

**Revenue Recognition.** Revenue from the systems segment was recognized upon shipment where product has met customer's specifications and when the title and ownership have passed to the customer. EMCORE's billing terms on system sales generally included a holdback of 10-20% on the total purchase price subject to completion of the installation and final acceptance process at the customer's site. Effective October 1, 2000, EMCORE changed its revenue recognition policy to defer this portion of revenue related to installation and final acceptance until such installation and final acceptance has been completed. This change was made in accordance with the implementation of U.S. Securities and Exchange Commission Staff Accounting Bulletin No. 101, *Revenue Recognition in Financial Statements* (SAB 101). The effect of this change was reported as the cumulative effect of a change in accounting principle in the year ended September 30, 2001. This net effect reflected the deferral as of October 1, 2000 of \$3.6 million of revenue and accrued installation expenses previously recognized. EMCORE recognized the revenue included in the cumulative effect adjustment during the year ended September 30, 2001. In fiscal 2004, EMCORE will report first quarter results of the systems segment as a discontinued operation due to the divestiture.

Revenue from the components and subsystems segment is recognized upon shipment provided we have received a signed purchase order, the price is fixed, the product meets the customers' specifications, title and ownership have transferred to the customer and there is reasonable assurance of collection of the sales proceeds. The majority of our products have shipping terms that are FOB or FCA shipping point. The difference between FOB and FCA is that under FCA terms, the customer designates a shipping carrier of choice to be used. Under both terms, we fulfill the obligation of delivery when the goods are handed over to the carrier at our shipping dock. If inventory is maintained at a consigned location, revenue is recognized when our customer pulls product for its use.

As a result of the Tecstar acquisition in 2002, EMCORE records revenues from solar panel contracts using the percentage-of-completion method where the elapsed time from award of a contract to completion of performance generally exceeds 6 months. Revenue is recognized in proportion to actual costs incurred compared to total anticipated costs expected to be incurred for each contract. If estimates of costs to complete long-term contracts indicate a loss, a provision is made for the total loss anticipated. EMCORE has numerous contracts that are in various stages of completion. Such contracts require estimates to determine the appropriate cost and revenue recognition. EMCORE uses all available information in determining estimates of the extent of progress towards completion, contract revenues and contract costs. Estimates are revised as additional information becomes available. During fiscal 2003, EMCORE recorded approximately \$0.2 million in anticipated losses on certain long-term contracts.

Contract revenue represents reimbursement by various U.S. Government entities to aid in the development of new technology. The contract funding may be based on either a cost-plus or a cost-share arrangement. Cost-plus funding is determined based on actual costs plus a set percentage margin. For the cost-share contracts, the actual costs relating to the activities to be performed by us under the contract are divided between the U.S. Government and us based on the terms of the contract. The government's cost share is then paid to us. A contract is considered complete when all significant costs have been incurred,

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and the research reporting requirements to the customer have been met. The contracts typically require the submission of a written report that documents the results of such research, as well as some material deliverables. The revenue and expense classification for contract activities is based on the nature of the contract. For contracts



where we anticipate that funding will exceed direct costs over the life of the contract, funding is reported as contract revenue and all direct costs are reported as costs of contract revenue. For contracts under which we anticipate that direct costs of the activities subject to the contract will exceed amounts to be funded over the life of the contract, costs over and above the funded amount are reported as research and development expenses. Revenues from Government contracts amounted to approximately \$5.2 million, \$3.3 million and \$2.5 million for the years ended September 30, 2003, 2002 and 2001, respectively.

EMCORE also provides service for its products. Revenue from time and materials based service arrangements is recognized as the service is performed. Revenue from service contracts is recognized ratably over the term of such service contracts. Service revenue is insignificant for all periods presented.

In rare occurrences, at the customer's written request, EMCORE enters into bill and hold transactions whereby title transfers to the customer, but the product does not ship until a specified later date. EMCORE recognizes revenues associated with the sale of product from bill and hold arrangements when the product is complete, ready to ship, and all bill and hold criteria have been met.

*Research and Development.* Research and development costs are charged to expense as incurred.

*Income Taxes.* Income taxes are accounted for using the asset and liability method under which deferred income taxes are recognized for the tax consequences of "temporary differences" by applying enacted statutory tax rates applicable to future years to differences between the financial statement carrying amounts and the tax basis of existing assets and liabilities and operating losses and tax credit carry forwards. The effect on deferred taxes for a change in tax rates is recognized as income in the period that includes the enactment date. Management provides valuation allowances against the deferred tax asset for amounts which are considered "more likely than not" to be realized.

*Use of Estimates.* The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates. EMCORE's most significant estimates relate to accounts receivable allowances, inventory valuation reserves, the valuation of goodwill, intangibles and other long-lived assets, warranty accruals and revenue recognition when utilizing the percentage-of-completion method.

*Stock Options.* EMCORE accounts for its employee stock option-based compensation plans under Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations. Accordingly, no compensation expense is recognized for stock option-based compensation unless the quoted market price of the stock at the grant date is in excess of the amount the employee must pay to acquire the stock. EMCORE has not recognized any stock option-based compensation expense in any of the periods presented. In December 2002, the Financial Accounting Standards Board (FASB) issued SFAS No. 148, *Accounting for Stock-Based Compensation — Transition and Disclosure, an amendment of FASB Statement No. 123*. SFAS No. 148 amends SFAS No. 123, *Accounting for Stock-Based Compensation*, to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, SFAS No. 148 amends the disclosure requirements of SFAS No. 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. EMCORE implemented SFAS No. 148 in the quarter ended March 31, 2003.

The following table illustrates the effect on the net loss and net loss per share if EMCORE had applied the fair value recognition provisions of SFAS No. 123 to stock based compensation:

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	For the year ended September 30,		
	2003	2002	2001
Net loss	\$(38,525)	\$(129,761)	\$(12,288)
Deduct: Total stock based employee compensation expense determined under fair value based methods for all awards, net of related tax effects	(3,339)	(4,998)	(4,358)
Pro forma net loss	<u>\$(41,864)</u>	<u>\$(134,759)</u>	<u>\$(16,646)</u>

The pro forma disclosures shown above were calculated for all options using the Black-Scholes option pricing model with the following assumptions:

	For the year ended September 30,		
	2003	2002	2001
Expected dividend yield	0%	0%	0%
Expected stock price volatility	112%	112%	104%
Risk-free interest rate	2.8%	2.6%	3.9%
Weighted average expected life (in years)	5	5	5

*Comprehensive Income.* SFAS No. 130, *Reporting Comprehensive Income*, establishes standards for reporting and display of comprehensive income and its components in financial statements. It requires that all items that are required to be recognized under accounting standards as components of comprehensive income be reported in the financial statement that is displayed with the same prominence as other financial statements. Comprehensive income consists of net earnings, the net unrealized gains or losses on available for sale marketable securities and foreign currency translation adjustments and is presented in the consolidated statements of shareholders' equity.

*Recent Financial Accounting Pronouncements.* In November 2002, the FASB issued Financial Interpretation No. 45 (FIN 45), *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*. FIN 45 clarifies that a guarantor is required to recognize, at the inception of the guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The initial recognition and initial measurement provisions of FIN 45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. FIN 45 also requires enhanced and additional disclosures of guarantees in financial statements for the years ending after December 15, 2002. As discussed in Footnote 9—Commitments and Contingencies, EMCORE has guaranteed a loan associated with its GELcore joint venture.

In January 2003, the FASB issued Interpretation No. 46, *Consolidation of Variable Interest Entities*. This interpretation defines when a business enterprise must consolidate a variable interest entity. This interpretation applies immediately to variable interest entities created after January 31, 2003 and became effective for all other transactions as of July 1, 2003. However, in October 2003 the FASB permitted companies to defer the July 1, 2003 effective date to December 31, 2003, in whole or in part, and indicated that it would provide further



clarification of this interpretation before December 31, 2003. The Company has determined that it is not reasonably probable that it will be required to consolidate or disclose information about a variable interest entity.

In April 2003, the FASB issued SFAS No. 149, *Amendment of Statement 133 on Derivative Instruments and Hedging Activities*. SFAS No. 149 amends and clarifies financial accounting and reporting for derivative instruments, including certain derivative instruments embedded in other contracts (collectively referred to as derivatives) and for hedging activities under SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*. The changes in SFAS No. 149 improve financial reporting by requiring that contracts with comparable characteristics be accounted for similarly. In particular, SFAS No. 149 (1) clarifies under what circumstances a contract with an initial net investment meets the characteristic of a derivative discussed in paragraph 6(b) of SFAS No. 133, (2) clarifies when a derivative contains a financing component, (3) amends the definition of an underlying to conform it to language used in FIN 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*, and (4) amends certain other existing pronouncements. Those

changes will result in more consistent reporting of contracts as either derivatives or hybrid instruments. SFAS No. 149 is to be applied prospectively to contracts entered into or modified after June 30, 2003, with certain exceptions, and for hedging relationships designated after June 30, 2003. Adopting this statement did not have a material impact on the financial position, results of operations, or cash flows of EMCORE.

In May 2003, the FASB issued SFAS No. 150, *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*. SFAS No. 150 establishes standards for how an issuer classifies and measures in its statement of financial position certain financial instruments with characteristics of both liabilities and equity. It requires that an issuer classify a financial instrument that is within its scope as a liability (or an asset in some circumstances) because that financial instrument embodies an obligation of the issuer. SFAS No. 150 is effective for financial instruments entered into or modified after May 31, 2003, and otherwise is effective at the beginning of the first interim period beginning after June 15, 2003, except for mandatorily redeemable financial instruments of nonpublic entities. Adopting this statement did not have a material impact on the financial position, results of operations, or cash flows of EMCORE.

### NOTE 3. Earnings (Loss) Per Share

EMCORE accounts for earnings (loss) per share under the provision of SFAS No. 128, *Earnings Per Share*. Basic earnings (loss) per share is calculated by dividing net earnings (loss) applicable to common stock by the weighted average number of common stock shares outstanding for the period. Diluted earnings per share reflects the potential dilution that could occur if EMCORE's outstanding stock options were exercised (calculated using the treasury stock method). The effect of outstanding common stock purchase options and warrants, the convertible preferred stock and the convertible subordinated notes have been excluded from the diluted earnings per share calculation since the effect of such securities is anti-dilutive. The following table lists the number of shares used in the earnings per share calculations.

(in thousands, except per share data)	For the fiscal years ended September 30,		
	2003	2002	2001
Loss before cumulative effect of a change in accounting principle	\$(38,525)	\$(129,761)	\$ (8,642)
Cumulative effect of a change in accounting principle	—	—	(3,646)
Net loss	(38,525)	(129,761)	(12,288)
Preferred stock dividends	—	—	—
Periodic accretion of preferred stock to redemption value	—	—	—
Net loss attributable to common shareholders	<u>\$(38,525)</u>	<u>\$(129,761)</u>	<u>\$(12,288)</u>
Weighted average of outstanding common shares – basic and diluted	36,999	36,539	34,438
Loss per basic and diluted share before cumulative effect of a change in accounting principle	\$ (1.04)	\$ (3.55)	\$ (0.25)
Loss per basic and diluted share – Cumulative effect of a change in accounting principle	—	—	(0.11)
Net loss per basic and diluted share	<u>\$ (1.04)</u>	<u>\$ (3.55)</u>	<u>\$ (0.36)</u>

### NOTE 4. Acquisitions and Divestitures

In March 2002, EMCORE acquired certain assets of Tecstar for a total cash purchase price, including related acquisitions costs, of approximately \$25.1 million. This acquisition vertically integrated all aspects of satellite solar panel construction within EMCORE and enabled EMCORE to further penetrate the satellite communications market. The results of operations from this acquisition have been included in EMCORE's consolidated results of operations from the acquisition closing date. This acquisition is not significant on a pro forma basis and therefore pro forma financial statements are not provided. The purchase price allocation was as follows:

Property and equipment	\$ 2,242
Other assets	558
Intellectual property	1,900
Goodwill	20,384
Total	<u>\$25,084</u>

In January 2003, EMCORE purchased Agere Systems, Inc.'s CATV transmission systems, telecom access and Satcom components business, formerly Ortel Corporation (Ortel) for \$26.2 million in cash in order to broaden EMCORE's product portfolio. Ortel designs and manufactures high quality optoelectronic solutions that enable voice, video and data networks.

The results of operations from this acquisition have been included in EMCORE's consolidated results of operations from the acquisition closing date. The effects of the acquisition have been presented using the purchase method of accounting. The total purchase price of the transaction has been allocated to assets and



liabilities based on management's estimate of their fair values. The following represents the allocation of the purchase price over the estimated fair values of the acquired assets and assumed liabilities of Ortel.

Cash	\$25,000
Acquisition costs	<u>1,200</u>
Total purchase price	<u>\$26,200</u>
Allocation of purchase price based on fair values:	
Assets acquired:	
Inventories.	\$ 6,473
Property, plant and equipment	8,570
Identifiable intangible assets	3,275
Goodwill	9,982
Less: warranty reserve	<u>(2,100)</u>
Net assets acquired	<u>\$26,200</u>

The following unaudited condensed consolidated pro forma financial data has been prepared to give effect to EMCORE's acquisition of certain assets and liabilities of Ortel. It does not purport to represent what the consolidated results of operations or financial position of EMCORE would actually have been if the acquisition had occurred on the dates referred to below, nor does it purport to project the results of operations or financial position of EMCORE for any future period. The unaudited condensed consolidated pro forma statement of operations data was prepared by combining the operations of EMCORE with the operations of Ortel, giving effect to the acquisition as though it occurred on the first day of the respective fiscal year.

**Condensed Consolidated Pro Forma Statement of Operations Data**  
**For the year ended September 30, 2003**  
**(unaudited)**

	<u>EMCORE</u>	<u>Pro Forma</u>
Revenues	\$113,106	\$123,177
Net loss	(38,525)	(42,997)
Net loss per basic and diluted share	\$ (1.04)	\$ (1.16)

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**Condensed Consolidated Pro Forma Statement of Operations Data**  
**For the year ended September 30, 2002**  
**(unaudited)**

	<u>EMCORE</u>	<u>Pro Forma</u>
Revenues	\$ 87,772	\$ 143,572
Net loss	(129,761)	(162,196)
Net loss per basic and diluted share	\$ (3.55)	\$ (4.44)

The acquisition of certain assets of Alvesta Corporation in December, 2002 for a purchase price of \$0.3 million is not significant on a pro forma basis and is therefore not included in the table above.

**NOTE 5. Restructuring and Impairment Charges**

In fiscal 2002, EMCORE recorded pre-tax charges to income totaling \$51.2 million, which included impairment and restructuring charges of \$36.7 million and other charges of \$14.5 million, as described below.

***Impairment Charges***

In fiscal 2002, we determined certain plant and equipment was impaired and as a result, we recorded impairment charges of \$34.8 million, of which \$4.0 million related to EMCORE's systems segment and \$30.8 million related to the components and subsystems segment. By December 2001, EMCORE completed new facilities in anticipation of expanding market prospects. Business forecasts updated in fiscal 2002 indicated significantly diminished prospects, primarily based on the downturn in the telecommunications industry. As a result of these circumstances, management determined that the long-lived assets should be assessed for impairment. Based on the outcome of this assessment, EMCORE recorded a \$23.5 million non-cash asset impairment charge to plant and equipment. This entire charge related to the components and subsystems segment. The fair values of the assets were determined based upon a calculation of the present value of the expected future cash flows to be generated by its facilities. The remainder of the impairment charge totaling \$11.3 million related to certain manufacturing assets that were disposed of. Such decision was made based upon the downturn in the economic environment that affected certain product lines causing these manufacturing assets to become idle.

***Restructuring Charges***

In fiscal 2002, EMCORE proceeded with a restructuring program, consisting of the realignment of all engineering, manufacturing and sales/marketing operations, as well as workforce reductions. Included in the provision for restructuring and impairment charges were severance and fringe benefit charges of \$1.9 million related to employee termination costs for 330 employees. The workforce was reduced in both of EMCORE's business segments, all of which were entitled to termination benefits. Of the severance charges recorded, \$1.1 million related to EMCORE's systems segment and \$0.8 million related to the components and subsystems segment.

***Other Charges***

In fiscal 2002, EMCORE recorded a \$11.9 million charge to cost of revenues, of which \$4.2 million related to EMCORE's systems segment and \$7.7 million related to the component and subsystems segment. Consistent with the downturn in the markets served by EMCORE, management evaluated its inventory levels in light of actual and forecasted revenue. The inventory charge related to reserves for excess inventory that EMCORE believed it was carrying as a result of the market conditions. Included in selling, general, and administrative expense was a \$2.6 million charge related to a loss provision for accounts receivable for customers whose current financial condition and payment history indicate payment is doubtful.

**NOTE 6. Joint Ventures**

***GELcore***



In January 1999, General Electric Lighting and EMCORE formed GELcore, a joint venture to develop and market HB-LED lighting products. General Electric Lighting and EMCORE have agreed

that this joint venture will be the exclusive vehicle for each party's participation in solid-state lighting. Under the terms of the joint venture agreement, EMCORE has a 49% non-controlling interest in the GELcore venture and accounts for this investment using the equity method of accounting. In both fiscal 2003 and 2002, EMCORE contributed approximately \$2.0 million to the joint venture. For the years ended September 30, 2003, 2002, and 2001, EMCORE recognized a loss of \$1.2 million, \$2.7 million and \$4.9 million, respectively, related to this joint venture which was recorded as a component of other income and expense. As of September 30, 2003 and 2002, EMCORE's net investment in this joint venture amounted to approximately \$9.2 million and \$8.5 million, respectively.

#### **Uniroyal Optoelectronics**

In March 1997, EMCORE and a subsidiary of Uniroyal Technology Corporation formed Uniroyal Optoelectronics LLC (UOE), a joint venture, to manufacture, sell and distribute HB-LED wafers and package-ready devices. For the year ended September 30, 2001, EMCORE recognized a loss of \$7.4 million related to this joint venture, which was recorded as a component of other income and expense.

In fiscal 2001, EMCORE recorded a net gain of \$10.0 million upon receipt of UTCI common stock in connection with the sale of the UOE joint venture. In fiscal 2002, UTCI and its subsidiaries filed voluntary petitions for reorganization under Chapter 11 of the U.S. Bankruptcy Code. As a result, EMCORE wrote off its investment in UTCI totaling \$14.0 million in fiscal 2002.

#### **NOTE 7. Balance Sheet Data**

##### • **Accounts receivable, net**

The components of accounts receivable consisted of the following:

(in thousands)	At September 30, 2003	At September 30, 2002
Accounts receivable	\$ 25,156	\$ 24,029
Accounts receivable – unbilled	2,134	3,135
	27,290	27,164
Allowance for doubtful accounts	(1,695)	(3,347)
Total	<u>\$ 25,595</u>	<u>\$ 23,817</u>

##### • **Inventories**

The components of inventories consisted of the following:

(in thousands)	As of September 30,	
	2003	2002
Raw materials	\$12,519	\$19,926
Work-in-process	6,994	8,706
Finished goods	5,593	2,395
Total	<u>\$25,106</u>	<u>\$31,027</u>

##### • **Property, Plant and Equipment**

Property, plant and equipment and their estimated useful lives are summarized below:

(in thousands)	Estimated Useful Lives	As of September 30,	
		2003	2002
Land	—	\$ 2,502	\$ 2,502
Building and improvements	15-40 years	60,887	60,777
Equipment	3-5 years	77,611	69,223
Furniture and fixtures	5 years	6,041	4,843
Leasehold improvements	5 years	1,803	1,729
Construction in progress	—	2,336	1,094
Property and equipment under capital lease	5 years	429	429
		151,609	140,597
Less: accumulated depreciation and amortization		(55,800)	(39,295)



Total	<u>\$ 95,809</u>	<u>\$101,302</u>
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At September 30, 2003, minimum future lease payments due under the capital leases are as follows:

<b>(in thousands)</b>	
Period ending:	
September 30, 2004	\$ 58
September 30, 2005	25
September 30, 2006	12
September 30, 2007	8
September 30, 2008	<u>—</u>
Total minimum lease payments	103
Less: amount representing interest	<u>10</u>
Net minimum lease payments	93
Less: current portion	<u>52</u>
Long-term portion	<u>\$ 41</u>

Depreciation expense amounted to approximately \$16.8 million, \$16.3 million and \$17.1 million in fiscal 2003, 2002 and 2001, respectively. Accumulated amortization on assets accounted under capital leases amounted to approximately \$0.3 million as of September 30, 2003 and 2002.

- **Intangible Assets, net**

Intangible assets include patents and other intellectual property. Patent costs include costs related to obtaining product patents that enhance and maintain EMCORE's intellectual property position. Patent costs are amortized on a straight-line basis over five years or over the remaining life of the patent, whichever is less. Total patent amortization expense amounted to approximately \$447,000, \$450,000 and \$346,000 for the years ended September 30, 2003, 2002, and 2001, respectively. In March 2002, in connection with the Tecstar acquisition, EMCORE allocated \$1.9 million of the purchase price towards intellectual property. This intellectual property is being amortized on a straight-line basis over five years. In January 2003, in connection with the Ortel acquisition, EMCORE acquired \$3.3 million of intellectual property. This intellectual property is being amortized on a straight-line basis over a 5-15 year period. Total intellectual property amortization expense in fiscal 2003 and 2002 approximated \$898,000 and \$206,000, respectively.

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The components of intangible assets consisted of the following:

(in thousands)	At September 30, 2003			At September 30, 2002		
	Gross Assets	Accumulated Amortization	Net Assets	Gross Assets	Accumulated Amortization	Net Assets
Patents	\$2,585	\$(1,447)	\$1,138	\$2,674	\$(1,326)	\$1,348
Acquired intellectual property:						
Ortel	3,274	(486)	2,788	—	—	—
Tecstar	1,900	(586)	1,314	1,900	(206)	1,694
Alvesta	<u>193</u>	<u>(32)</u>	<u>161</u>	<u>—</u>	<u>—</u>	<u>—</u>
Total	<u>\$7,952</u>	<u>\$(2,551)</u>	<u>\$5,401</u>	<u>\$4,574</u>	<u>\$(1,532)</u>	<u>\$3,042</u>

Future amortization expense as of September 30, 2003 is as follows:

<b>(in thousands)</b>	
<b>Year ending:</b>	<b>Amortization</b>
September 30, 2004	\$1,527
September 30, 2005	1,411
September 30, 2006	1,283
September 30, 2007	792
September 30, 2008	159
Thereafter	<u>229</u>
Future amortization expense	<u>\$5,401</u>

- **Goodwill**

The changes in the carrying amount of goodwill for the years ended September 30, 2003 and 2002, are as follows:

	Component and Subsystem Segment
Balance as of October 1, 2001	\$ 2,687
Goodwill acquired during the year	20,384
Goodwill written off related to sale of subsidiary	<u>(2,687)</u>
Balance as of September 30, 2002	20,384
Goodwill acquired during the year	<u>9,982</u>



In March 2002, EMCORE acquired Tecstar and allocated approximately \$20.4 million to goodwill. In May 2002, EMCORE wrote-off the goodwill related to the fiscal 2001 acquisition of Analytical Solutions, Inc. and Training Solutions, Inc., (ASI/TSI) as EMCORE sold ASI/TSI back to its original owner. In January 2003, EMCORE purchased Ortel and allocated approximately \$10.0 million to goodwill.

## • Accrued Expenses

Accrued expenses consisted of the following:

(in thousands)	As of September 30,	
	2003	2002
Salary and other compensation costs	\$ 4,206	\$ 4,392
Interest	3,055	3,281
Warranty	2,745	2,134
Other	3,263	3,068
Total	<u>\$13,269</u>	<u>\$12,875</u>

## NOTE 8. Debt Facilities

### Convertible Subordinated Notes

In May 2001, EMCORE issued \$175.0 million aggregate principal amount of its 5% convertible subordinated notes due in May 2006. Net proceeds received by EMCORE, after costs of issuance, were approximately \$168.8 million. Interest is payable in arrears semiannually on May 15 and November 15 of each year, which began on November 15, 2001. The notes are convertible into EMCORE common stock at a conversion price of \$48.76 per share, subject to certain adjustments, at the option of the holder. The notes may be redeemed at EMCORE's option, on or after May 20, 2004 at specific redemption prices. There are no financial covenants related to these notes. For the years ended September 30, 2003, 2002 and 2001, interest expense relating to the notes approximated \$8.3 million, \$8.8 million and \$3.2 million respectively.

In May 2002, the Board of Directors authorized EMCORE from time to time to repurchase a portion of the notes in one or more open market transactions, in accordance with certain guidelines. In December 2002, EMCORE purchased, in multiple transactions, \$13.2 million principal amount of the notes at prevailing market prices, for an aggregate purchase price of approximately \$6.3 million. As a result of the transaction, EMCORE recorded a gain from operations of approximately \$6.6 million after netting unamortized debt issuance costs of approximately \$0.3 million.

EMCORE may continue to repurchase notes through various means, including but not limited to one or more open market or privately negotiated transactions in future periods. The timing and amount of repurchase, if any, whether de minimis or material, will depend on many factors, including but not limited to, the availability of capital, the prevailing market price of the convertible notes and overall market conditions.

## NOTE 9. Commitments and Contingencies

EMCORE leases certain land, facilities, and equipment under non-cancelable operating leases. Facility and equipment rent expense under such leases amounted to approximately \$2.1 million, \$1.1 million and \$0.8 million for the years ended September 30, 2003, 2002 and 2001, respectively.

Future minimum rental payments under EMCORE's non-cancelable operating leases with an initial or remaining term of one year or more as of September 30, 2003 are as follows:

(in thousands)	
Period ending:	Operating
September 30, 2004	\$ 2,069
September 30, 2005	1,759
September 30, 2006	1,483
September 30, 2007	1,237
September 30, 2008	1,024
thereafter	2,785
Total minimum lease payments	<u>\$10,357</u>

Future amounts to be received by EMCORE related to the sublease of certain of the Company's facilities are as follows:

(in thousands)	
Period ending:	Subleases
September 30, 2004	\$158
September 30, 2005	193
September 30, 2006	136
Total sublease income	<u>\$487</u>

In fiscal 2000, GELcore entered into a Revolving Loan Agreement (the "GELcore Credit Facility") with General Electric Canada, Inc., an affiliate of GE, which is the owner of a 51% controlling share of GELcore. The GELcore Credit Facility provides for borrowings of up to Canadian \$7.5 million (U.S. \$5.6 million at September 30, 2003) at a rate of interest based on prevailing Canadian interest rates. Amounts outstanding under the GELcore Credit Facility are payable on demand. GELcore's Credit Facility expired in August 2003 however GELcore is in the process of extending this credit facility and expects completion by December 31, 2003. EMCORE has guaranteed 49% (i.e., its proportionate share) of GELcore's obligations under the GELcore Credit Facility. As of September 30, 2003, EMCORE's share of this obligation was \$0.7 million. If GELcore's cash



generated from operations and cash on hand are not sufficient to repay the amount outstanding under the facility, EMCORE would be required to make the necessary pro rata payment as outlined above. See footnote 6 — Joint Ventures.

EMCORE is from time to time involved in litigation incidental to the conduct of its business. Management and its counsel believe that such pending litigation will not have a material adverse effect on EMCORE's results of operations, cash flows or financial condition.

#### NOTE 10. Income Taxes

The principal differences between the U.S. statutory and effective income tax rates were as follows:

	For the years ended September 30,		
	2003	2002	2001
U.S. statutory income tax benefit rate	(34.0)%	(34.0)%	(34.0)%
State rate, net of federal benefit	(5.9)%	(5.9)%	(5.9)%
Change in valuation allowance	39.9%	39.9%	35.0%
Non-deductible amortization	—	—	4.8%
Other	—	—	0.1%
Effective tax rate	<u>—</u>	<u>—</u>	<u>—</u>

As a result of its losses, EMCORE did not incur any income tax expense during the years ended September 30, 2003, 2002 and 2001. The components of EMCORE's net deferred taxes were as follows:

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	For the years ended September 30,	
(in thousands)	2003	2002
Deferred tax assets:		
Federal net operating loss carryforwards	\$ 71,723	\$ 41,857
Research credit carryforwards (state and federal)	4,124	3,850
Inventory reserves	1,712	6,401
Accounts receivable reserves	573	1,138
Fixed assets	8,241	11,104
Accrued warranty reserve	933	725
State net operating loss carryforwards	13,942	8,127
Investment writedown	4,766	4,766
Other	1,670	1,621
Valuation reserve – federal	(96,677)	(61,702)
Valuation reserve – state	(9,409)	(17,429)
Total deferred tax assets	1,598	458
Deferred tax liabilities:		
Fixed assets and intangibles	(1,598)	(458)
Net deferred taxes	<u>\$ —</u>	<u>\$ —</u>

EMCORE has established a valuation reserve as it has not determined that it is "more likely than not" that the net deferred tax asset is realizable, based upon EMCORE's past earnings history.

As of September 30, 2003, EMCORE had net operating loss (NOL) carryforwards for tax purposes of approximately \$365.0 million that expire in the years 2004 through 2023. In fiscal 2003, \$0.6 million of NOL carryforwards expired and approximately \$3.7 million are due to expire in fiscal 2004. As of September 30, 2003, EMCORE had federal research credit carryovers for tax purposes of approximately \$1.0 million that expire in the years 2004 through 2023. EMCORE believes that the consummation of certain equity transactions and a significant change in the ownership during fiscal years 1995, 1998 and 1999 have constituted a change in control under Section 382 of the Internal Revenue Code (IRC). Due to the change in control, EMCORE's ability to use its federal NOL carryovers and federal research credit carryovers to offset future income and income taxes, respectively, are subject to annual limitations under IRC Sections 382 and 383.

#### NOTE 11. Shareholders' Equity

**Preferred Stock:** EMCORE's certificate of incorporation authorizes the Board of Directors to issue up to 5,882,352 shares of preferred stock of EMCORE upon such terms and conditions having such rights, privileges and preferences as the Board of Directors may determine.

**Future Issuances:** At September 30, 2003, EMCORE has reserved a total of 7,204,440 shares of its common stock for future issuances as follows:

	Number of shares
For exercise of outstanding warrants to purchase common stock	31,535
For exercise of outstanding common stock options	5,751,066
For future common stock option awards	575,832
For future issuances to employees under the Employee Stock Purchase Plan	846,007
Total reserved	<u>7,204,440</u>

#### NOTE 12. Stock Options and Warrants

**Stock Option Plans.** EMCORE maintains two incentive stock option plans: the 2000 Stock Option Plan (2000 Plan) and the 1995 Incentive and Non Statutory Stock Option Plan (1995 Plan and, together

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with the 2000 Plan, the Option Plans). The 1995 Plan authorizes the grant of options to purchase up to 2,744,118 shares of EMCORE's common stock, and as of September 30, 2003, no options were available for issuance thereunder. The 2000 Plan authorizes the grant of options to purchase up to 4,750,000 shares of EMCORE's common stock, and as of September 30, 2003, 575,832 options were available for issuance thereunder. Certain options under the Option Plans are intended to qualify as incentive stock options pursuant to Section 422A of the Internal Revenue Code.

During fiscal 2003, 4,181,349 options were granted pursuant to the 2000 Plan at exercise prices ranging from \$1.65 to \$3.20 per share.

Stock options generally vest over three to five years and are exercisable over a ten-year period. As of September 30, 2003, 2002 and 2001, options with respect to 3,088,389, 2,493,083 and 1,793,047 were exercisable, respectively.

The following table summarizes the activity under the Option Plans:

	<u>Shares</u>	<u>Weighted Average Exercise Price</u>
<b>Outstanding as of September 30, 2000</b>	3,770,676	\$13.54
Granted	270,900	36.87
Exercised	(462,315)	7.01
Cancelled	<u>(176,530)</u>	<u>28.85</u>
<b>Outstanding as of September 30, 2001</b>	3,402,731	15.49
Granted	3,156,782	7.93
Exercised	(133,441)	7.25
Cancelled	<u>(1,419,484)</u>	<u>12.52</u>
<b>Outstanding as of September 30, 2002</b>	5,006,588	11.79
Granted	4,181,349	1.87
Exercised	(156,716)	3.14
Cancelled	<u>(3,280,155)</u>	<u>13.28</u>
<b>Outstanding as of September 30, 2003</b>	<u>5,751,066</u>	<u>\$ 3.98</u>

At September 30, 2003, stock options outstanding were as follows:

<u>Exercise Prices</u>	<u>Options Outstanding</u>	<u>Weighted Average Remaining Contractual Life (Years)</u>	<u>Exercisable Options</u>	<u>Weighted Average Exercise Price</u>
< \$1	1,920	4.18	1,920	\$ 0.23
\$1 < to ≤ \$5	4,158,727	7.25	1,798,077	1.72
\$5 < to ≤ \$10	1,330,769	7.55	1,034,742	7.51
> \$10	<u>259,650</u>	6.54	<u>253,650</u>	22.09
	5,751,066		3,088,389	

On September 30, 2002, EMCORE offered to all employees holding options with an exercise price of at least \$4.00 per share, excluding executive officers, the opportunity to exchange those options for new options to be issued on May 1, 2003. On October 30, 2002, EMCORE accepted all options tendered for exchange and canceled them all. On May 1, 2003, EMCORE issued 2,972,149 new options in exchange for the tendered options. These new options had an exercise price of \$1.82, which was the closing price for EMCORE common stock on May 1, 2003. With the exception of the new exercise price, the new options had the same terms as the tendered options.

#### Warrants.

In October 2001, 822,256 warrants issued in connection with EMCORE's October 1996 debt guarantee were exercised at \$5.10 per share totaling \$4.2 million in proceeds. Set forth below is a summary of EMCORE's outstanding warrants at September 30, 2003:

<u>Underlying Security</u>	<u>Exercise Price</u>	<u>Warrants</u>	<u>Expiration Date</u>
Common Stock <sup>(1)</sup>	\$ 2.16	14,796	August 21, 2006
Common Stock <sup>(2)</sup>	\$15.16-31.18	16,739	March 5, 2006
			– September 1, 2006

(1) Issued in connection with EMCORE's December 1997 acquisition of MicroOptical Devices, Inc.

(2) Issued in connection with EMCORE's IP agreement with Sandia Laboratories.

#### NOTE 13. Related Parties

In January 1999, EMCORE and General Electric Lighting formed GELcore, a joint venture to develop and market HB- LED lighting products. As of September 30, 2003 and 2002, EMCORE had an outstanding receivable balance from GELcore totaling \$0.3 million and \$0.5 million, respectively.

To market, sell, and service certain product in Japan and China, EMCORE relies on Hakuto Co., Ltd. for marketing, product distribution and service. Hakuto has exclusive distribution rights for certain systems-related products in China and Japan through March 2008. Hakuto has marketed and serviced EMCORE's products since 1988 via six branch offices and owns approximately 4% of EMCORE's common stock. Until he retired in 2002, the President of Hakuto had also been a member of EMCORE's Board of Directors since 1997. For the years



ended September 30, 2003, 2002 and 2001, sales made through Hakuto amounted to approximately \$9.5 million, \$2.5 million and \$14.5 million, respectively, which represents sales to several Japanese customers.

From time to time, prior to July 2002, EMCORE has lent money to certain of its executive officers and directors. Pursuant to due authorization from EMCORE's Board of Directors, EMCORE lent \$3.0 million to the Chief Executive Officer (CEO) in February 2001. The promissory note matures on February 22, 2006 and bears interest (compounded annually) at a rate of (a) 5.18% per annum through May 23, 2002 and (b) 4.99% from May 24, 2002 through maturity. All interest is payable at maturity. The note is partially secured by a pledge of shares of EMCORE's common stock. Accrued interest at September 30, 2003 totaled \$414,000 and is recorded with the loan principal within other assets. During fiscal 2003, the highest amount of the CEO's indebtedness to EMCORE was \$3.4 million. In addition, pursuant to due authorization of the Company's Board of Directors, EMCORE lent \$85,000 to the Chief Financial Officer (CFO) of EMCORE in December 1995. The promissory note executed by the CFO does not bear interest and provides for offset of the loan via bonuses payable to the CFO over a period of up to 25 years. The balance outstanding on the loan is currently \$82,000, and no larger amount has been outstanding since the beginning of fiscal 2003.

NOTE 14. Segment Data

EMCORE had two reportable operating segments: the systems and the components and subsystems segment. The segments reported are the segments for which separate financial information is available and evaluated regularly by management in deciding how to allocate resources and in assessing performance.

The systems segment was our TurboDisc systems business which designed, developed and manufactured metal organic chemical vapor deposition (MOCVD) systems and manufacturing processes. Systems segment revenues were derived primarily from sales of TurboDisc MOCVD systems, as well as spare parts, services, and other related products. In fiscal 2004, EMCORE will report first quarter results for the systems segment as a discontinued operation due to the divestiture.

The components and subsystems segment is comprised of our Fiber Optics, Photovoltaics and Electronic Materials and Devices product lines. EMCORE's Fiber Optics product line supports our

CATV, telecommunications, data and storage and Satcom target markets. Specific products for this communications-related product line include optical components and subsystems for CATV and FTTx, VCSEL and PIN photodiodes components, 10G LX4, CX4, TOSA, ROSA packaged parts and modules, and Satcom transmitter and receiver components. EMCORE's Photovoltaic revenues are derived primarily from the sales of solar power conversion products including solar cells, covered interconnect solar cells (CICs) and solar panels. Revenues from the Electronic Materials and Devices product line include wireless products, such as RF materials including HBTs and enhancement-mode pHEMTs, and also MR sensors and process development technology.

Summarized financial information for the reportable segments as of and for the years ended September 30, 2003, 2002 and 2001 is shown below. The reportable segments were each managed separately because they manufacture distinct products. There are no intercompany sales transactions between the two segments. The accounting policies of the segments are described in the footnotes to the financial statements.

	For the year ended September 30, 2003			
	Systems segment	Components and subsystems segment	Unallocated expenses	TOTAL
	(in thousands)			
STATEMENTS OF OPERATIONS				
Revenues	\$52,681	\$ 60,425	\$ —	\$113,106
Cost of revenues	36,545	62,044	—	98,589
Gross profit (loss)	16,136	(1,619)	—	14,517
Gross margin	30.6%	(2.7%)	—	12.8%
Operating expenses:				
Selling, general and administrative	9,476	19,514	—	28,990
Research and development	5,773	16,408	—	22,181
Gain from debt extinguishment	—	—	(6,614)	(6,614)
Total operating expenses	15,249	35,922	(6,614)	44,557
Operating income (loss)	887	(37,541)	6,614	(30,040)
Other expenses:				
Interest expense, net	—	—	7,257	7,257
Equity in joint venture	—	—	1,228	1,228
Total other expenses	—	—	8,485	8,485
Net income (loss)	\$ 887	\$(37,541)	\$(1,871)	\$(38,525)

	For the year ended September 30, 2002				For the year ended September 30, 2001			
	Systems segment 2002	Components and subsystems segment 2002	Unallocated expenses 2002	TOTAL 2002	Systems segment 2001	Components and subsystems segment 2001	Unallocated expenses 2001	TOTAL 2001
	(in thousands)							
STATEMENTS OF OPERATIONS								
Revenues	\$ 35,878	\$ 51,894	\$ —	\$ 87,772	\$131,141	\$ 53,473	\$ —	\$184,614
Cost of revenues.	25,650	62,764	—	88,414	72,725	41,784	—	114,509
Gross profit (loss)	10,228	(10,870)	—	(642)	58,416	11,689	—	70,105
Gross margin	28.5%	(20.9%)	—	(0.7%)	44.5%	21.9%	—	38.0%
Operating expenses:								
Selling, general and administrative	15,534	12,693	—	28,227	15,748	14,103	—	29,851
Research and development	12,878	28,092	—	40,970	11,821	41,570	—	53,391
Goodwill amortization	—	—	—	—	—	1,147	—	1,147
Impairment and restructuring	5,085	31,636	—	36,721	—	—	—	—
Total operating expenses	33,497	72,421	—	105,918	27,569	56,820	—	84,389
Operating income (loss)	(23,269)	(83,291)	—	(106,560)	30,847	(45,131)	—	(14,284)
Other expenses:								
Interest expense, net	—	—	6,107	6,107	—	—	(2,048)	(2,048)
Other (income) expense	—	—	14,388	14,388	—	—	(15,920)	(15,920)
Equity in joint ventures	—	—	2,706	2,706	—	—	12,326	12,326



Total other expenses	—	—	23,201	23,201	—	—	(5,642)	(5,642)
Income (loss) before cumulative effect of a change in accounting principle	(23,269)	(83,291)	(23,201)	(129,761)	30,847	(45,131)	5,642	(8,642)
Cumulative effect of a change in accounting principle	—	—	—	—	(3,646)	—	—	(3,646)
Net income (loss)	<u>\$(23,269)</u>	<u>\$(83,291)</u>	<u>\$(23,201)</u>	<u>\$(129,761)</u>	<u>\$ 27,201</u>	<u>\$(45,131)</u>	<u>\$ 5,642</u>	<u>\$(12,288)</u>

In fiscal 2002, EMCORE recorded pre—tax charges to income totaling \$51.2 million, which included fixed asset impairment charges of \$34.8 million, excess inventory reserve of \$11.9 million, loss provision for accounts receivable of \$2.6 million and restructuring charges of \$1.9 million. In January 2003, EMCORE acquired Ortel, which contributed approximately \$23.6 million of fiber optic revenues in fiscal 2003.

## Customers

During fiscal 2003, revenues from Cree Inc., associated with the systems segment, represented 11.5% of total revenues. During fiscal 2002, revenues from Motorola, associated with both the systems and components and subsystems segments represented 12.9% of total revenue. In fiscal 2001, no customers accounted for more than 10% of total revenue.

EMCORE has generated a significant portion of its sales to customers outside the United States. Historically, EMCORE has received most payments for products and services in U.S. dollars, and therefore, EMCORE does not anticipate that fluctuations in any currency will have a material effect on its financial condition or results of operations. The following chart contains a breakdown of EMCORE's consolidated revenues by geographic region:

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For the fiscal years ended September 30,						
Region	2003		2002		2001	
(in thousands)	Revenue	% of revenue	Revenue	% of revenue	Revenue	% of revenue
United States	\$ 64,189	56.8%	\$58,844	67.0%	\$ 96,551	52.3%
Asia	34,132	30.2%	15,268	17.4%	76,848	41.6%
Europe	14,785	13.0%	13,660	15.6%	11,215	6.1%
TOTAL	<u>\$113,106</u>	<u>100%</u>	<u>\$87,772</u>	<u>100%</u>	<u>\$184,614</u>	<u>100%</u>

Sales to the United States include sales to Canada which have not, historically, been material.

## NOTE 15. Employee Benefits

EMCORE has a savings plan (Savings Plan) that qualifies as a deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Under the Savings Plan, participating employees may defer a portion of their pretax earnings, up to the Internal Revenue Service annual contribution limit. All employer contributions are made in EMCORE's common stock. For the years ended September 30, 2003, 2002 and 2001, EMCORE contributed approximately \$701,000, \$714,000 and \$830,000, respectively, in common stock, to the Savings Plan.

EMCORE adopted an Employee Stock Purchase Plan (Purchase Plan) in fiscal 2000. The Purchase Plan provides employees of EMCORE with an opportunity to purchase common stock through payroll deductions. The purchase price is set at 85% of the lower of the fair market value of common stock at the beginning of the participation period, the first Trading Day on or after January 1st, or at the end of the participation period, the last Trading Day on or before December 31st of such year. Contributions are limited to 10% of an employee's compensation. The participation periods have a 12-month duration, with new participation periods beginning in January of each year. The Board of Directors has reserved 1,000,000 shares of common stock for issuance under the Purchase Plan. In January 2003, 89,180 shares of common stock were purchased under the fiscal 2002 Purchase Plan. In January 2002, 48,279 shares of common stock were purchased under the fiscal 2001 Purchase Plan. In January 2001, 16,534 shares of common stock were purchased under the fiscal 2000 Purchase Plan.

## NOTE 16. Quarterly Financial Data (Unaudited)

(in thousands)	Dec. 31, 2001	Mar. 31, 2002	Jun. 30, 2002	Sept. 30, 2002	Dec. 31, 2002	Mar. 31, 2003	June 30, 2003	Sept. 30, 2003
Revenues	\$ 19,137	\$ 23,078	\$ 20,275	\$ 25,282	\$23,246	\$ 27,674	\$32,180	\$ 30,006
Cost of revenues	16,592	32,208	17,748	21,866	21,020	24,923	26,405	26,241
Gross profit (loss)	2,545	(9,130)	2,527	3,416	2,226	2,751	5,775	3,765
Operating expenses:								
Selling, general and administrative	6,998	9,483	6,522	5,224	5,779	7,392	7,673	8,146
Research and development	11,947	11,625	9,398	8,000	3,606	5,428	5,480	7,667
Impairment and restructuring	—	35,939	—	782	—	—	—	—
Gain from debt extinguishment	—	—	—	—	(6,614)	—	—	—
Total operating expenses	18,945	57,047	15,920	14,006	2,771	12,820	13,153	15,813
Operating loss	(16,400)	(66,177)	(13,393)	(10,590)	(545)	(10,069)	(7,378)	(12,048)
Other expenses:								
Interest expense (income), net	928	1,682	1,761	1,736	1,781	1,741	1,821	1,914
Other (income) expense	13,262	—	—	1,126	—	—	—	—
Equity in net loss of unconsolidated affiliates	377	851	769	709	571	731	33	(107)
Total other expenses/(income)	14,567	2,533	2,530	3,571	2,352	2,472	1,854	1,807
Net loss.	<u>\$(30,967)</u>	<u>\$(68,710)</u>	<u>\$(15,923)</u>	<u>\$(14,161)</u>	<u>\$(2,897)</u>	<u>\$(12,541)</u>	<u>\$(9,232)</u>	<u>\$(13,855)</u>

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## NOTE 17. Subsequent Events

### Acquisition



On October 9, 2003, EMCORE announced that it had acquired Molex Inc.'s 10G Ethernet transceiver business (Molex) for an initial \$1.0 million in cash and an additional \$1.5 million in progress payments expected to be paid during fiscal 2004. This transaction included assets, products and intellectual property including several Molex product designers.

## Divestiture

As mentioned in footnote 1, EMCORE sold its TurboDisc systems business to Veeco on November 3, 2003. The unaudited pro forma financial information presented below is based upon the available information and certain assumptions that management believes are reasonable. It does not purport to represent what EMCORE's financial position or results of operations would have been had the transaction in fact occurred as of the date or at the beginning of the periods presented, or to project EMCORE's financial position or results of operations for any future date or period.

### Condensed Consolidated Pro Forma Statement of Operations Data For the year ended September 30, 2003

	<u>Actual</u>	<u>Disposition</u>	<u>Pro Forma</u>
Revenues	\$113,106	\$(55,353)	\$ 57,753
Net loss	(38,525)	(4,014)	(42,539)
Net loss per basic and diluted share	\$ (1.04)	\$ (0.11)	\$ (1.15)

### Condensed Consolidated Pro Forma Statement of Operations Data For the year ended September 30, 2002

	<u>Actual</u>	<u>Disposition</u>	<u>Pro Forma</u>
Revenues	\$ 87,772	\$(38,384)	\$ 49,388
Net loss	(129,761)	16,884	(112,877)
Net loss per basic and diluted share	\$ (3.55)	\$ 0.46	\$ (3.09)

## Debt Exchange Offering

On December 24, 2003, EMCORE filed a Form S-4 Registration Statement under the Securities Act of 1933 pursuant to which EMCORE may offer to exchange new 5% convertible senior subordinated notes due May 15, 2011 and common stock for our existing 5% convertible subordinated notes due May 15, 2006. Interest would be payable on the new notes at a rate of 5% per year, payable in cash semi-annually on May 15 and November 15 of each year. The new notes would be convertible at any time prior to maturity.

## INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Shareholders of  
EMCORE Corporation  
Somerset, New Jersey

We have audited the accompanying consolidated balance sheets of EMCORE Corporation (the "Company") as of September 30, 2003 and 2002, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended September 30, 2003. Our audits also included the financial statement schedule listed in the Index at Item 15(a)(2). These financial statements and the financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of EMCORE Corporation as of September 30, 2003 and 2002, and the results of its operations and its cash flows for each of the three years in the period ended September 30, 2003 in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for revenue to conform to the U.S. Securities and Exchange Commission Staff Accounting Bulletin No. 101, *Revenue Recognition in Financial Statements*. Also as discussed in Note 2 to the consolidated financial statements, effective October 1, 2001, the Company changed its method of accounting for goodwill and intangible assets upon adoption of Statement of Financial Accounting Standards No. 142, *Goodwill and Other Intangible Assets*.

DELOITTE & TOUCHE L.L.P.

Parsippany, New Jersey  
December 24, 2003

## Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosures

None.



## Item 9A. Controls and Procedures

### (a) Evaluation of disclosure controls and procedures

The term "disclosure controls and procedures" is defined in Rules 13a-14(c) and 15d-14(c) of the Exchange Act. These rules refer to the controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files under the Exchange Act is recorded, processed, summarized and reported within required time periods. Our Chief Executive Officer and our Chief Financial Officer have evaluated the effectiveness of our disclosure controls and procedures as of a date within 90 days before the filing of this annual report (the "Evaluation Date"), and they have concluded that, as of the Evaluation Date, such controls and procedures were effective at ensuring that required information will be disclosed on a timely basis in our reports filed under the Exchange Act.

### (b) Changes in internal controls

We maintain a system of internal accounting controls that are designed to provide reasonable assurance that our books and records accurately reflect our transactions and that our established policies and procedures are followed. Subsequent to the Evaluation Date, there were no significant changes to our internal controls over financial reporting or in other factors that could significantly affect our internal controls over financial reporting.

## PART III

### Item 10. Directors and Executive Officers of the Registrant

Set forth below is certain information with respect to each of the directors and executive officers of EMCORE.

THOMAS J. RUSSELL, PH.D., 72, has been a director of the Company since May 1995 and was elected Chairman of the Board on December 6, 1996. Dr. Russell founded Bio/Dynamics, Inc. in 1961 and managed the company until its acquisition by IMS International in 1973, following which he served as President of that company's Life Sciences Division. From 1984 until 1988, he served as Director, then as Chairman of IMS International until its acquisition by Dun & Bradstreet in 1988. From 1988 to 1992, he served as Chairman of Applied Biosciences, Inc.

REUBEN F. RICHARDS, JR., 48, joined the Company in October 1995 as its President and Chief Operating Officer and became Chief Executive Officer in December 1996. Mr. Richards has been a director of the Company since May 1995. From September 1994 to December 1996, Mr. Richards was a Senior Managing Director of Jesup & Lamont Capital Markets Inc. ("Jesup & Lamont" (an affiliate of a registered broker-dealer)). From December 1994 to 1997, he was a member and President of Jesup & Lamont Merchant Partners, L.L.C. From 1992 through 1994, Mr. Richards was a principal with Hauser, Richards & Co., a firm engaged in corporate restructuring and management turnarounds. From 1986 until 1992, Mr. Richards was a Director at Prudential-Bache Capital Funding in its Investment Banking Division. Mr. Richards also serves on the board of the Company's GELcore LLC joint venture.

THOMAS G. WERTHAN, 47, joined the Company in 1992 as its Chief Financial Officer and a director. Mr. Werthan has over nineteen years experience in assisting high technology, venture capital financed growth companies. Prior to joining the Company in 1992, he was associated with The Russell Group, a venture capital partnership, as Chief Financial Officer for several portfolio companies. The Russell Group was affiliated with Thomas J. Russell, Chairman of the Board of Directors of the Company. From 1985 to 1989, Mr. Werthan served as Chief Operating Officer and Chief Financial Officer for Audio Visual Labs, Inc., a manufacturer of multimedia and computer graphics equipment.

RICHARD A. STALL, PH.D. Dr. Stall, 47, became a director of the Company in December 1996. Dr. Stall helped found the Company in 1984 and has been Vice President--Technology at the Company since October 1984, except for a sabbatical year in 1993 during which Dr. Stall acted as a consultant to the Company and his position was left unfilled. Prior to 1984, Dr. Stall was a member of the technical staff of AT&T Bell Laboratories and was responsible for the development of MBE technologies. He has co-authored more than 75 papers and holds seven patents on MBE and MOCVD technology and the characterization of compound semiconductor materials.

ROBERT LOUIS-DREYFUS Mr. Louis-Dreyfus, 56, has been a director of the Company since March 1997. Mr. Louis-Dreyfus has been the President and CEO of Louis Dreyfus Communications since May 2000. From 1993 through 2001, he was Chairman of the Board of Directors and Chief Executive Officer of adidas-Salomon AG. Prior to that time, he had been from 1990 until 1993 the Chief Executive Officer of Saatchi & Saatchi plc (now Cordiant plc) and a director of Saatchi & Saatchi plc from January 1990 until December 1994. Since 1992, he has been an investor and a director of several other companies, and is currently serving as director of Heidrick & Struggles since September 1999, advisory board member of The Parthenon Group since October 1998, President of Salomon S.A. since August 1998, Director of Jacobs AG since 2001, Chairman of the Board of IVS since 2002 and Chairman of the Board of Infront Sports and Media AG since 2002. From 1982 until 1988, he served as Chief Operating Officer (1982 to 1983) and then as Chief Executive Officer (from 1984 to 1988) of IMS International until its acquisition by Dun & Bradstreet in 1988.

ROBERT BOGOMOLNY, 65, has served as a director of the Company since April 2002. Since August 2002, Mr. Bogomolny has served as President of the University of Baltimore. Prior to that, he served as Corporate Senior Vice President and General Counsel of G.D. Searle & Company, a pharmaceuticals manufacturer, from 1987 to 2001. At G.D. Searle, Mr. Bogomolny was responsible for all of its legal, regulatory, quality control and public affairs activities. He also led its government affairs department in Washington, D.C., and served on the Searle Executive Management Committee.

CHARLES SCOTT, 54, has served as a director of the Company since February 1998. In March 2003, Mr. Scott retired as Chairman of Cordiant Communications Group plc, the successor corporation of the Saatchi & Saatchi Advertising Group. He joined Saatchi & Saatchi Company in 1990 and served as Chief Financial Officer until 1992 when he was appointed Chief Operating Officer. In 1993, he became Chief Executive Officer and held that position until 1995 when he assumed the title of Chairman.

JOHN GILLEN, 62, was appointed to the Board of Directors in March 2003 to fill the vacancy left by the retirement of Hugh Fenwick. Mr. Gillen has been a partner in the firm of Gillen and Johnson, P.A., Certified Public Accountants since 1974. Prior to that time, Mr. Gillen was employed by the Internal Revenue Service and Peat Marwick Mitchell & Company, Certified Public Accountants.

### NON-DIRECTOR EXECUTIVE OFFICERS:

HOWARD W. BRODIE, ESQ., 36, joined the Company in August 1999 and serves as Vice President, General Counsel and Secretary of the Company. From September 1995 to August 1999, Mr. Brodie was an Associate at the law firm of White & Case LLP, a New York law firm that has served as outside counsel to the



Company since 1997. While at White & Case LLP, Mr. Brodie practiced securities law and mergers and acquisitions. Mr. Brodie has worked on EMCORE matters since 1998, helping to negotiate and structure several EMCORE M&A transactions and joint ventures, including the sale of the TurboDisc division, the acquisitions of Tecstar, Ortel and Alvesta, and the GELore LLC joint venture with General Electric Lighting. In addition, Mr. Brodie represented the Company in its June 1999 and March 2000 public offerings and its 2001 convertible note offering. From August 1994 to August 1995, Mr. Brodie served as a judicial law clerk to Chief Judge Gilbert S. Merritt on the Sixth Circuit Court of Appeals. Mr. Brodie received his J.D. degree from Yale Law School.

SCOTT MASSIE, 42, joined the Company in September 2002 as General Manager – Albuquerque and California. From 1997 to 2000, Mr. Massie was Chief Operating Officer of IQE plc and its predecessor, QED. In 2000, Mr. Massie became President of IQE, Inc., the U.S. subsidiary of

IQE plc, and he held this position until 2002. Mr. Massie holds a B.S. in mathematics, a B.S. in physics and an M.S. in physics, all from Virginia Tech University, and he is also a Commonwealth Fellow of the Commonwealth of Virginia.

#### AUDIT COMMITTEE

The Company's Audit Committee currently consists of Messrs. Scott, Gillen and Bogomolny. Each member of the audit committee is currently an independent director. The Board of Directors has determined that Messrs. Scott and Gillen are each audit committee financial experts.

#### SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Based on the Company's review of copies of all disclosure reports filed by Directors and executive officers of the Company pursuant to Section 16(a) of the Exchange Act, as amended, the Company believes that there was compliance with all filing requirements of Section 16(a) applicable to Directors and executive officers of the Company during the fiscal year.

#### CODE OF ETHICS

EMCORE has adopted a written code of ethics that applies to our principal executive officer, our principal financial officer and our principal accounting officer. A copy of this code of ethics is annexed to this Annual Report as Exhibit 14.1.

#### Item 11. Executive Compensation

The following table sets forth certain information concerning the annual and long-term compensation for services in all capacities to the Company for fiscal years ended September 30, 2003, 2002 and 2001 of those persons who during such fiscal year (i) served as the Company's chief executive officer and (ii) were the four most highly-compensated officers (other than the chief executive officer) (collectively, the "Named Executive Officers"):

Name and Principal Position	Fiscal Year	Annual Compensation			Long-term Compensation Securities Underlying Options	All Other Compensation
		Salary	(1) Bonus	Other Annual Compensation		
Reuben F. Richards, Jr. President and Chief Executive Officer	2003	\$327,307	—	—	—	—
	2002	\$315,000	\$335,000	—	120,000	—
	2001	\$298,750	\$215,000	—	—	—
Richard A. Stall Vice President – Chief Technology Officer	2003	\$203,461	—	—	—	—
	2002	\$185,000	—	—	100,000	—
	2001	\$182,500	\$340,000	—	—	—
Thomas G. Werthan Chief Financial Officer	2003	\$190,392	—	—	—	—
	2002	\$175,000	—	—	42,500	—
	2001	\$171,250	\$ 80,000	—	—	—
Howard Brodie, Esq. Vice President and General Counsel	2003	\$181,538	—	—	—	—
	2002	\$150,800	—	—	42,500	—
	2001	\$142,800	\$ 65,000	—	—	—
Scott Massie General Manager	2003	\$175,000	\$ 79,936	—	—	—
	2002	—	—	—	—	—
	2001	—	—	—	—	—

(1) The Company's bonus compensation is based on a calendar year schedule. Accordingly, bonus amounts are included with respect to the fiscal year in which they were actually paid.

#### OPTION GRANTS IN FISCAL 2003

No options were granted to Named Executive Officers in Fiscal 2003.

#### AGGREGATED OPTION EXERCISES IN FISCAL 2003

##### AND YEAR-END OPTION VALUES <sup>(1)</sup>

The following table sets forth the number of shares acquired by the Named Executive Officers upon options exercised during Fiscal 2003 and the value thereof, together with the number of exercisable and unexercisable options held by the Named Executive Officers on September 30, 2003 and the aggregate gains that would have been realized had these options been exercised on September 30, 2003, even though such options had not been exercised by the Named Executive Officers.



Name	Total Number of Unexercised Options at September 30, 2003 <sup>(2)</sup>		Value of Unexercised In-the-Money Options at September 30, 2003 <sup>(3)</sup>	
	Exercisable	Unexercisable	Exercisable	Unexercisable
Reuben F. Richards, Jr.	293,824	60,000	\$83,824	—
Richard A. Stall	279,768	50,000	\$ 3,773	—
Thomas G. Werthan	264,120	21,250	\$53,899	—
Howard W. Brodie, Esq.	91,250	43,750	—	—
Scott Massie	10,000	40,000	\$ 900	\$3,600

- (1) No options were exercised by the Named Executive Officers in Fiscal 2003.
- (2) This represents the total number of shares subject to stock options held by the named executives at September 30, 2003. These options were granted on various dates during the fiscal years 1995 through 2002.
- (3) These amounts represent the difference between the exercise price of the stock options and the closing price of the Common Stock on September 30, 2003, for all the in-the-money options held by each named executive. The in-the-money stock option exercise price is \$1.515, except with regard to Mr. Massie's options, for which the exercise price is \$2.85. These stock options were granted at the fair market value of the Common Stock on the grant date.

## COMPENSATION OF DIRECTORS

The Board of Directors held three meetings during Fiscal 2003 and took certain actions by telephonic meeting and unanimous written consent. Pursuant to its Directors' Stock Award Plan, the Company pays non-employee directors a fee in the amount of \$3,000 per Board meeting attended and \$500 for each committee meeting attended (\$600 for the Chairman of the committee), including in each case reimbursement of reasonable out-of-pocket expenses incurred in connection with such Board or committee meeting. Payment of all fees will be made in common stock of the Company at the average of the last reported bid and ask prices as of the close of trading the previous day on the Nasdaq National Market. No director who is an employee of the Company will receive compensation for services rendered as a director. From time to time, Board members are invited to attend meetings of Board committees of which they are not members; in such cases, such Board members receive a committee meeting fee of \$500. During Fiscal 2003, all directors of the Company, except for Mr. Louis-Dreyfus, attended at least 75% of the aggregate meetings of the Board and committees on which they served, during their tenure on the Board. Mr. Louis-Dreyfus attended two of the three meetings.

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## COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

The Company's Compensation Committee currently consists of Messrs. Russell and Scott. The Compensation Committee reviews and recommends to the Board of Directors the compensation and benefits of all executive officers of the Company, reviews general policy matters relating to compensation and benefits of executive officers and employees of the Company and administers the issuance of stock options and stock appreciation rights and awards of restricted stock to the Company's officers and key salaried employees. No member of the Compensation Committee is now or ever was an officer or an employee of the Company. No executive officer of the Company serves as a member of the Compensation Committee of the Board of Directors of any entity one or more of whose executive officers serves as a member of the Company's Board of Directors or Compensation Committee. The Compensation Committee meets once annually.

EMCORE owns approximately 2.0 million shares of Uniroyal Technologies Corporation ("UTCI"), which it received from UTCI in August 2001 as payment for its interest in the Uniroyal Optoelectronics, LLC joint venture. Dr. Russell, Chairman of the Company's Board of Directors, owns approximately 3.6 million shares of UTCI. Based on UTCI's last Annual Report on Form 10-K, the Company holds 6.6%, and Dr. Russell holds 11.9% of UTCI's outstanding common stock. On August 25, 2002, UTCI and its subsidiaries filed petitions for reorganization under Chapter 11 of the U.S. Bankruptcy Code. The Company sits on the creditors committee in UTCI's bankruptcy reorganization, and believes it is unlikely to receive any distribution in respect of its equity holdings. As a result, the Company has written off the approximately 2.0 million shares of UTCI common stock it holds as worthless. The Company is continuing to pursue its claims against UTCI and its affiliates in respect of approximately \$1.2 million in unpaid obligations. The Company recently learned that UTCI's case has been converted to Chapter 7 under the U.S. Bankruptcy Code.

## REPORT OF THE COMPENSATION COMMITTEE OF THE BOARD OF DIRECTORS

The Compensation Committee recommends compensation arrangements for the Company's executive officers and administers the Company's 1995 Incentive and Non-Statutory Stock Option Plan and the 2000 Stock Option Plan. The Compensation Committee also administers the MicroOptical Devices, Inc. 1996 Stock Option Plan. The Company's compensation program is designed, with the advice of independent consultants, to be competitive with companies similar in structure and business to the Company.

The Company's executive compensation program is structured to help the Company achieve its business objectives by:

- \* setting levels of compensation designed to attract and retain superior executives in a highly competitive environment;
- \* designing equity-related and other performance-based incentive compensation programs to align the interests of management with the ongoing interests of shareholders;
- \* providing incentive compensation that varies directly with both Company financial performance and individual contributions to that performance; and
- \* linking compensation to elements that affect short- and long-term stock price performance.

The Company has used a combination of salary and incentive compensation, including cash bonuses and equity-based incentives to achieve its compensation goals.

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## COMPENSATION OF EXECUTIVE OFFICERS

### SALARY



The salary levels of the Company's executive officers including the Chief Executive Officer, are intended to reflect the duties and level of responsibilities inherent in each position. Comparison of the salaries paid by other companies in similar industries are considered in establishing the salary level for each position. The particular qualifications of the individual holding the position, relevant experience and the importance to the Company of the individual's expected contribution are also considered in establishing salaries.

In general, compensation payments in excess of \$1.0 million to any of the executive officers are subject to a limitation on deductibility by the Company under Section 162(m) of the Internal Revenue Code of 1986, as amended. The deduction limit does not apply to performance based compensation that satisfies certain requirements. The Compensation Committee has not yet determined a policy with regard to Section 162(m); however, no officer of the Company is expected to earn compensation in excess of \$1.0 million in Fiscal 2003.

PERFORMANCE AND INCENTIVE COMPENSATION

Arrangements for bonus compensation for the Company's executive officers are negotiated individually with each executive officer. Bonus compensation arrangements take various forms, but generally are based on factors such as the Company's financial performance, operating performance and individual performance.

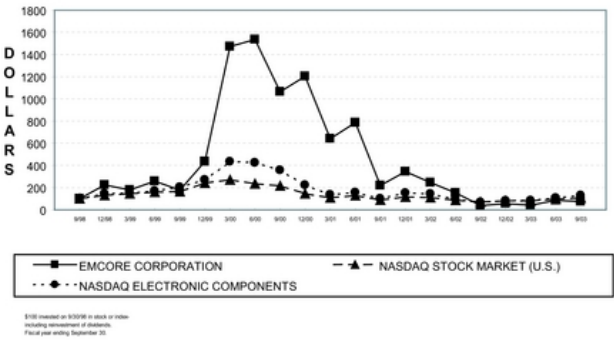
EQUITY-RELATED INCENTIVES

The Company's primary method of compensating senior executives has been through the grant of stock options granted at the commencement of their employment agreements. Stock options grants to executive officers are generally long-term and usually vest over a three- to five-year period. The Company has favored stock options as a way of aligning management's interests with the long-term interests of the Company's shareholders and inducing executives to remain with the Company on a long-term basis. Individual option grants have been based on the performance and level of responsibility of the optionee.

Compensation Committee:  
Thomas J. Russell  
Charles Thomas Scott

STOCK PERFORMANCE GRAPH

The following graph and table compares the cumulative total shareholders' return on the Company's Common Stock for the five-year period from the October 1, 1998 through September 30, 2003 with the cumulative total return on the Nasdaq Stock Market Index and the Nasdaq Electronic Components Stocks Index (SIC Code 3674). The comparison assumes \$100 was invested on October 1, 1998 in the Company's Common Stock. The Company did not declare, nor did it pay any dividends during the comparison period. Notwithstanding any statement to the contrary in any of the Company's previous or future filings with the Commission, the graph and table shall not be incorporated by reference into any such filings.



Item 12. Security Ownership of Certain Beneficial Owners and Management

The following table sets forth as of December 1, 2003 certain information regarding the beneficial ownership of voting Common Stock by (i) each person or "group" (as that term is defined in Section 13(d)(3) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) known by the Company to be the beneficial owner of more than 5% of the voting Common Stock, (ii) each named executive officer of the Company, (iii) each director and nominee and (iv) all directors and executive officers as a group (10 persons). Except as otherwise indicated, the Company believes, based on information furnished by such persons, that each person listed below has the sole voting and investment power over the shares of Common Stock shown as beneficially owned, subject to common property laws, where applicable. Shares beneficially owned include shares and underlying warrants and options exercisable within 60 days of December 1, 2003. Unless otherwise indicated, the address of each of the beneficial owners is c/o the Company, 145 Belmont Drive, Somerset, New Jersey 08873.

Name	Shares Beneficially Owned	Percent of Common Stock
Thomas J. Russell <sup>(1)</sup>	5,015,554	13.2%
Reuben F. Richards, Jr. <sup>(2)</sup>	1,155,788	3.0%
Thomas G. Werthan <sup>(3)</sup>	316,374	*
Richard A. Stall <sup>(4)</sup>	411,965	1.1%
Robert Louis-Dreyfus <sup>(5)</sup>	3,301,916	8.7%
Robert Bogomolny	60,480	*
John Gillen	11,216	*
Charles Scott <sup>(6)</sup>	23,836	*
Howard W. Brodie, Esq. <sup>(7)</sup>	103,086	*
Scott Massie <sup>(8)</sup>	10,000	*



All directors and executive officers as a group (10 persons) <sup>(9)</sup>	10,405,714	26.6%
State of Wisconsin Investment Board <sup>(10)</sup>	6,099,500	16.0%
Capital Guardian Trust Co. <sup>(11)</sup>	4,842,140	12.7%
Wellington Management Company, LLP <sup>(12)</sup>	2,737,135	7.2%
Gallium Enterprises, Inc. <sup>(13)</sup>	3,301,916	8.7%
Franklin Advisors, Inc. <sup>(14)</sup>	1,931,720	5.1%
The AER 1997 Trust <sup>(15)</sup>	2,280,035	6.0%

\* Less than 1.0%.

1) Includes 2,280,035 shares are held by The AER 1997 Trust.

2) Includes options to purchase 323,824 shares.

3) Includes options to purchase 274,745 shares.

4) Includes options to purchase 304,768 shares.

5) All 3,301,916 shares held by Gallium Enterprises Inc.

6) Includes 11,836 shares owned by Kircal, Ltd.

7) Includes options to purchase 101,875 shares.

8) Includes options to purchase 10,000 shares

9) Includes options to purchase 1,015,212 shares.

10) The address of State of Wisconsin Investment Board is 121 East Wilson Street, 2<sup>nd</sup> Floor, Madison, WI, 53703-3474.

11) The address of Capital Guardian Trust Co. is 222 South Hope Street, 54<sup>th</sup> Floor, Los Angeles, CA 90071-1447.

12) The address of Wellington Management Company, LLP ("Wellington") is 75 State Street, 19<sup>th</sup> Floor, Boston, MA, 02109-1809. The total number of shares includes 458,135 shares into which the \$22,340,000 aggregate principal amount of the Company's 5% Convertible Subordinated Notes due 2006 held by Wellington or its affiliates are convertible.

13) Gallium Enterprises, Inc. is controlled by Robert Louis-Dreyfus, a member of the Board of Directors of the Company. The address of Gallium Enterprises, Inc. is 152 West 57th Street, 21st Floor, NYC, NY 10019.

14) The address of Franklin Advisors, Inc. is 1 Franklin Parkway, San Mateo, CA 94403.

15) Avery E. Russell, the daughter of Thomas J. Russell, Chairman of the Board of Directors of the Company, is he primary beneficiary of the AER 1997 Trust. The address of the trust is 117 Leabrook Lane, Princeton, NJ 08541.

Item 13. Certain Relationships and Related Transactions

The President of Hakuto, the Company's Asian distributor, retired from the Company's Board of Directors in Fiscal 2002, and Hakuto remains a minority shareholder of the Company. During the fiscal year ended September 30, 2003, sales made through Hakuto approximated \$9.5 million.

EMCORE owns approximately 2.0 million shares of Uniroyal Technologies Corporation ("UTCI"), which it received from UTCI in August 2001 as payment for its interest in the Uniroyal Optoelectronics, LLC joint venture. Dr. Russell, Chairman of the Company's Board of Directors, owns approximately 3.6 million shares of UTCI. Based on UTCI's last Annual Report on Form 10-K, the Company holds 6.6%, and Dr. Russell holds 11.9% of UTCI's outstanding common stock. On August 25, 2002, UTCI and its subsidiaries filed petitions for reorganization under Chapter 11 of the U.S. Bankruptcy Code. The Company sits on the creditors committee in UTCI's bankruptcy reorganization, and believes it is unlikely to receive any distribution in respect of its equity holdings. As a result, the Company has written off the approximately 2.0 million shares of UTCI common stock it holds as worthless. The Company is continuing to pursue its claims against UTCI and its affiliates in respect of approximately \$1.2 million in unpaid obligations. The Company recently learned that UTCI's case has been converted to Chapter 7 under the U.S. Bankruptcy Code.

From time to time prior to July 2002, the Company has lent money to certain of its executive officers and directors. Pursuant to due authorization of the Company's Board of Directors, the Company in 1995 lent \$85,000 to Thomas G. Werthan, Chief Financial Officer and a director of the Company. The promissory note executed by Mr. Werthan does not bear interest and provides for forgiveness of the loan via bonuses payable to Mr. Werthan over a period of up to 25 years. The balance outstanding on the loan is currently \$82,000, and no larger amount has been outstanding since the beginning of Fiscal 2003. In February 2001 pursuant to due authorization from the Board of Directors, the Company lent \$3.0 million to Reuben F. Richards, Jr., President and CEO of the Company. The promissory note evidencing this loan matures on February 22, 2006 and bears interest (compounded annually) at a rate of (a) 5.18% per annum through May 23, 2002 and (b) 4.99% from May 24, 2002 through maturity. All interest is payable at maturity. The note is partially secured by a pledge of shares of the Company's common stock. Accrued interest at September 30, 2003 totaled approximately \$414,000. During Fiscal 2003, the highest amount of Mr. Richards' indebtedness to the Company was \$3.4 million.

Item 14. Principal Accounting Fees and Services

Independent Auditors

Deloitte & Touche LLP was the independent auditing firm of EMCORE's financial statements for Fiscal 2003 and 2002. In addition to performing the audit services for Fiscal 2003 and 2002, we also retained Deloitte & Touche LLP to perform other audit-related and non-audit related services during these periods. The aggregate fees billed by Deloitte & Touche LLP in connection with audit and non-audit services rendered for Fiscal 2003 and Fiscal 2002 were as follows:

AUDIT AND NON-AUDIT FEES

The following table sets forth fees for services Deloitte & Touche LLP provided during fiscal years 2003 and 2002:

	2003	2002
Audit fees <sup>(1)</sup>	\$209,000	\$265,000
Audit-related fees <sup>(2)</sup>	123,000	11,000
Tax fees <sup>(3)</sup>	86,000	51,000
All other fees <sup>(4)</sup>	—	373,000
Total	<u>\$418,000</u>	<u>\$700,000</u>

(1) Represents fees for professional services rendered in connection with the audit of our annual financial statements and reviews of our quarterly financial statements, advice on accounting matters that arose during the audit and audit services provided in connection with other statutory or regulatory filings.



- (2) Represents fees for professional services related to the audits of our employee benefit plans and also for pro-forma work.
- (3) Represents fees for tax services provided in connection with general tax matters.
- (4) All other fees represent fees for services provided to EMCORE which are otherwise not included in the categories above. These fees primarily relate to systems, mergers and acquisitions and securities work. This project was pre-approved by our Audit Committee.

The Audit Committee has determined that the provision of non-audit services by Deloitte & Touche LLP is compatible with maintaining the independence of Deloitte & Touche LLP. In accordance with its charter, the Audit Committee approves in advance all audit and non-audit services to be rendered by Deloitte & Touche LLP. In considering whether to approve such services, the Audit Committee will consider the following:

- Whether the services are performed principally for the Audit Committee,
- The effect of the service, if any, on audit effectiveness or on the quality and timeliness of the Company's financial reporting process,
- Whether the service would be performed by a specialist (e.g., technology specialist) and who also provide audit support and whether that would hinder independence,
- Whether the service would be performed by audit personnel and, if so, whether it will enhance the knowledge of the Company's business,
- Whether the role of those performing the service would be inconsistent with the auditor's role (e.g., a role where neutrality, impartiality and auditor skepticism are likely to be subverted),
- Whether the audit firm's personnel would be assuming a management role or creating a mutuality of interest with management,
- Whether the auditors would be in effect auditing their own numbers,
- Whether the project must be started and completed very quickly,
- Whether the audit firm has unique expertise in the service, and
- The size of the fee(s) for the non-audit service(s).

During 2003, all professional services provided Deloitte & Touche LLP were pre-approved by the Audit Committee in accordance with this policy.

## PART IV

### Item 15. Exhibits, Financial Statement Schedules and Reports on Form 8-K

#### 15(a)(1) Financial Statements

	<u>Page</u>
Included in Part II, Item 8 of this report:	
Consolidated Statements of Operations for the years ended September 30, 2003, 2002, and 2001	53
Consolidated Balance Sheets as of September 30, 2003 and 2002	54
Consolidated Statements of Shareholders' Equity for the years ended September 30, 2003, 2002 and 2001	55
Consolidated Statements of Cash Flows for the years ended September 30, 2003, 2002, and 2001	56
Notes to Consolidated Financial Statements	58
Independent Auditors' Report	78

#### 15(a)(2) Financial Statement Schedule

#### Schedule II

**EMCORE CORPORATION**  
**Valuation and Qualifying Accounts and Reserves**  
**For the years ended September 30, 2003, 2002 and 2001**

	Balance at Beginning of Period	Additions Charged to Costs and Expenses	Write-offs (Deductions)	Balance at End of Period
<b>Allowance for Doubtful Accounts</b>				
For the year ended September 30, 2003	\$3,347,000	\$1,713,000	\$(3,365,000)	\$1,695,000
For the year ended September 30, 2002	\$1,139,000	\$3,086,000	\$ (878,000)	\$3,347,000
For the year ended September 30, 2001	\$1,065,000	\$ 370,000	\$ (296,000)	\$1,139,000

Other schedules have been omitted since they are either not required or not applicable.

#### 15(b) Reports on Form 8-K



**15(c) Exhibits**

<b>Exhibit No.</b>	<b>Description</b>
2.1.	Asset Purchase Agreement, dated as of November 3, 2003, by and among Veeco St. Paul Inc., Veeco Instruments Inc. and Registrant (incorporated by reference to Exhibit 2.1 to Registrant's current report on Form 8-K filed November 18, 2003).
2.2	Asset Purchase Agreement, dated as of January 21, 2003, by and between Registrant and Agere Systems Inc. (incorporated by reference to Exhibit 2.1 to Registrant's current report on Form 8-K filed February 4, 2003).

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<b>Exhibit No.</b>	<b>Description</b>
3.1	Restated Certificate of Incorporation, dated December 21, 2001 (incorporated by reference to Exhibit 3.1 the registrant's annual report on Form 10-K for the fiscal year ended September 30, 2000).
3.2	Amended By-Laws, as amended December 6, 2000 (incorporated by reference to Exhibit 3.2 to the registrant's annual report on Form 10-K for the fiscal year ended September 30, 2000).
4.1	Indenture, dated as of May 7, 2001, between the registrant and Wilmington Trust Company, as Trustee (incorporated by reference to Exhibit 4.1 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2001).
4.2	Note, dated as of May 7, 2001, in the amount of \$175,000,000 (incorporated by reference to Exhibit 4.2 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2001).
10.1	Specimen certificate for shares of common stock (incorporated by reference to Exhibit 4.1 to Amendment No. 3 to the Registration Statement on Form S-1 (File No. 333-18565) filed with the Commission on February 24, 1997).
10.2	Form of \$11.375 (pre-split) Warrant (incorporated by reference to Exhibit 4.2 to the registrant's annual report on Form 10-K for the fiscal year ended September 30, 1998).
10.3	Registration Rights Agreement, dated November 30, 1998 by and between the registrant, Hakuto, UMI and UTC (incorporated by reference to Exhibit 10.16 to the registrant's annual report on Form 10-K for the fiscal year ended September 30, 1998).
10.4	Registration Rights Agreement, dated as of May 26, 1999, by and between EMCORE Corporation and GE Capital Equity Investments, Inc. (incorporated by reference to Exhibit 10.19 to Amendment No. 2 to the Registration Statement on Form S-3 (File No. 333-71791) filed with the Commission on June 9, 1999).
10.5	Registration Rights Agreement, dated as of May 7, 2001, among EMCORE and the Credit Suisse First Boston Corporation, on behalf of the initial purchasers (incorporated by reference to Exhibit 10.1 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2001).
10.6	Transaction Agreement dated January 20, 1999 between General Electric Company and the registrant (incorporated by reference to Exhibit 10.1 to EMCORE's filing on Form 10-Q/A, filed on May 17, 1999). Confidential treatment has been requested by EMCORE for portions of this document. Such portions are indicated by "[*]".
10.7	1995 Incentive and Non-Statutory Stock Option Plan (incorporated by reference to Exhibit 10.1 to the Amendment No. 1 to the Registration Statement on Form S-1 filed on February 6, 1997).
10.8	1996 Amendment to Option Plan (incorporated by reference to Exhibit 10.2 to Amendment No. 1 to the Registration Statement on Form S-1 filed on February 6, 1997).
10.9	MicroOptical Devices 1996 Stock Option Plan (incorporated by reference to Exhibit 99.1 to the Registration Statement on Form S-8 filed on February 6, 1998).
10.10	2000 Stock Option Plan (incorporated by reference to Exhibit 4.2 to the Registration Statement on Form S-8 filed on May 11, 2001).
10.11	2000 Employee Stock Purchase Plan (incorporated by reference to Exhibit 4.3 to the Registration Statement on Form S-8 filed on May 18, 2000).

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<b>Exhibit No.</b>	<b>Description</b>
10.12	Amended and Restated Note, dated as of May 23, 2002 between the registrant and Reuben F. Richards, Jr. (incorporated by reference to Exhibit 10.1 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended June 30, 2002).
10.13	Amended and Restated Stock Pledge Agreement, dated as of May 23, 2002 between the registrant and Reuben F. Richards, Jr. (incorporated by reference to Exhibit 10.2 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended June 30, 2002).
10.14	Membership Interest Purchase Agreement, dated as of August 2, 2001, by and among Uniroyal Technology Corporation, Uniroyal Compound Semiconductor, Inc., Uniroyal Optoelectronics, LLC and the registrant (incorporated by reference to Exhibit 2.1 to the registrant's quarterly report on Form 10-Q for the fiscal quarter ended June 30, 2001).
14.1	Code of Ethics for Financial Professionals.*
21.1	Subsidiaries of the Registrant.*
23.1	Consent of Deloitte & Touche LLP.*
31.1	Certificate of Chief Executive Officer pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a) as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 dated December 24, 2003.*
31.2	Certificate of Chief Financial Officer pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a) as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 dated December 24, 2003.*
32.1	Certificate of Chief Executive Officer pursuant to section 18 U.S.C. section 1350 dated December 24, 2003.*



\* Filed herewith

SIGNATURES

Pursuant to the requirements of the Section 13 or 15(d) of the Securities and Exchange Act of 1934, the registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized on December 24, 2003.

EMCORE CORPORATION

By  /s/ REUBEN F. RICHARDS, JR.  
Name: Reuben F. Richards, Jr.  
Title: President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constiutes and appoints each of Reuben F. Richards, Jr. and Thomas G. Werthan, each with power of substitution, for him in any and all capacities, to sign any amendments to this Form 10-K, and to file the same with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that either said attorney-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report on Form 10-K has been signed below by the following persons on behalf of the registrant in the capacities indicated, on December 24, 2003.

Signature	Title
<u> /s/ Thomas J. Russell</u>	Chairman of the Board and Director
Thomas J. Russell	
<u> /s/ Reuben F. Richards, Jr.</u>	President, Chief Executive Officer and Director (Principal Executive Officer)
Reuben F. Richards, Jr.	
<u> /s/ Thomas G. Werthan</u>	Vice President, Chief Financial Officer and Director (Principal Accounting and Financial Officer)
Thomas G. Werthan	
<u> /s/ Richard A. Stall</u>	Director
Richard A. Stall	
<u> /s/ Robert Louis-Dreyfus</u>	Director
Robert Louis-Dreyfus	
<u> /s/ Charles T. Scott</u>	Director
Charles T. Scott	
<u> /s/ Robert Bogomolny</u>	Director
Robert Bogomolny	
<u> /s/ John Gillen</u>	Director
John Gillen	

EXHIBIT INDEX

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\* Filed herewith



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D/C\*M6JYY;R7C5@9M1EG|08QF\*F%HE8;;6EW:8 MP(@DC'2D0:(BI"/009R|U=C8H)C(QY+ZC1GK#;C'E|JE>3\$US\$\*Y6;1\$ST MC\$P\$SLE&65JLW69O\*K;O4IAB5RU-M&4|7;5)Q,R+1-5F%)T?"4S&8P9 MJS#4QO#O#UB:Q7GMUN;AZ2O%K5;;49YJMBU1A@LT:B>\$F"1\_1B/-"G3%I M.(4336)HTCDBCDBVMQR%)\$DTRQ3Q)56B\*..5Z\$;J3MS?7,07|JK'^Z M'\_2P\_\\NCUS+U^ZJQ\_E'8?G74Y\*EA?#MCMVX-21M#CG6:1E%W|+|BC<9\_5%R M;(\$K\_E;FV0'0KJ)##-\_P'2JQ9C\$|L'6)=HXTET/\_C65(R3<&:-HL% MA|;MC|A|\\&YXS<8UFL)S9D<Y\\B\_L|L,S380D?#3<6'H\_<SH!^5@?\_M6=??5K&:-1:NG\*RR;E\*H;@A2\_#C)N^;6O6,W/@ZM>SB<+#!)FA8P17:Z; M#OCKMX5?2L(YXP\_92\_P|H#2CNRO+:-8E8\*[0.RP ME18AA\*SS1D)"X\*YC\*T4H|/4511&8%\*H^+VQL^7NV.9JT#1MN|BRC'8LC|G?3X\$ M).P-186B#8JO-/UWT1F%J;|SPJ\_R|L,&|X.D(LH,9+CEG0'D5+P7R0I.?! MK7B5X\*4H2,&+))VN2L7\*V,IAIF+Y|(%Z3'SE'B+U\*T>TMZS4BBL/7&J9=7\*# M+Q/RO\*O,CY\$KRS5HZM;YC>96?9S M3PG2|K7?G-/N#Z2A9..A;6C&2(C^UX1KNWF\*J, M09A;EZA;Z|F&1&6D9,DYE&BOJ&VMPBD|>NV4B9;AX#IPY1\$FZ6,B1!#8H4|-NZLD%J=6LU"6HTE?MDD ML/^\\EJ2K;&:-U;#096BCUEBBF48L-H^\\L\$45?B0@R\_\*DH63D945UD\* MRH85JUFZ+U^ZJQ\_E'8?G738N\$9I^>SY?HEYF6D0)AZ7\$A^TM\*\\DBF)=J.4I MRI/GCDA5"E4.4%"@!P\*8Q0,\\3&\*8M\_X\_Z\_=-\\|\_G01-G|4|P9PG@O! MU90X;AW\$8RZ;ICX1:48\*XBBD6QVD?;HHK(+O'2\_+77V\_M^7/3UL"43!M.X8F3-S|MP)C\*5VQ+\_B\_QEN5PY1 M>+OC3B\$U/8|MYM2\*~&,&+FZ8O.QCHN2B<&6FFUVYVL5QG-/&1E,7?M6FW M|BJD59ACV\_00KCJ\$;JVT)6-#7+<7|4I=P,Q^A1M+SW\$P5+@P0M3RR|K9JU8 M8JSK\*~H|QV'0+|JRZCG8;.:X.K^A\*\*F4\$\*V^SO)&T'9O(HD0^A-(@8 M@\_H.W.QTDV\*\$S\_N\*@ZZ\_J4TES\*76)H,7^PLDHUBG#6SRCV:L28M4C%|\_ MY\*R4DJ|E7+4R#MZI(\$UEQ;N54#>0?,&;SXV1Q"? (V038N;E221H/GN1"KIMD M?G!!@\$<40YQ+\\?HIPQU30Z+T"NTV1%RE.6<^2=J6WO^NP^E;O1X?HBZ; MD|?)Y^VO818LV3J;CMD;3(M\*J;Y<C<1-15%|T=0^Y+<Y-27KRDDFSN>2\\8 M8K;O7MD?6IS%\$XXFEAVT<.#550W46'97AK(NVFJ7E&M|F58&O033\*M%K R;F M@=-7;D#)>;X"YI)Y;<5^L7"O^))G\*H1%G,V^&%5&%E4|\_U385S(O@|X9\$A MMQWRXB'E(\$1@V|6QM V M#;-JUIG+E>+!6NY2D|;+K);>?G%5WK)KH-4 M&\*2SUJV7M%U5V;5LV\\(8-@|@DGX%UD4<|;A38+BH^6,H\*8V'R+&>H@|H^H^X MQ).73#V|V3MQA""\$9R;~\*F")R-(3UG/>+))YA/\*&;(W|9APS,+Y-O.MS#&6ZV|7L.P|Y|YEVYRXYPE+8@S6D;@6&1 M-AMJ.XEC#R1XD?+&8;|H\*\$S=O4T3S,O\_4>7@HRU:MF5@73>EAJCFCGCJQ3 M!##J|&TKHFV1YPR MSNC3\*TRN07\$\\WD#GPFRUM\_ODW4|\_74-B^U6\*~W78QKNW:1R,U8|D\_ MMX?>XZ/38G# A&BQ|5\_+IW>49N+9%\*Q029T?>6YJYOWVTYJG\$QL\\L3P\_MU9|7-NF?UV55Z8QSB.W.X)P|9LO8-M5X-BT9G=5-B3.6(E(@Q&Z0.HEYI M=A10.G)W;R)6^J5BIC.OX.^\$CD^1YR0)93?M2)/<\_THDE\_F1I7MB\_-L M1\$\*,L\*)&KLG@YRDIWDSSM|JACK|\_KEAG9.3B8Q1HU,Q9H-ES#Y0NR8G.R8N7YW;AD M:-LT502.8HV|G|G|5N^TA+SSVJ9U;R;KKE9=6(@GUB416GG<6S\$09M M\$PJV;J2\*1.8N3HHB;ETZ>3PW,L|6>)39V73\$VT\_)(QVR8DB:107-V6C2+Y;MOV?HIF5-PIN4KVAW+1&N:K@JNPUFOBZA>;BG\_Y62)K\$USUCTZFU+>6V272 M|3M-L|\_||#02|SJ9|5+8HJ%6XSP%> &|,4%K(RB)|+9C2-56.Q\*DT MRRS(%ED6:968B1P67+5Z4LTN;C,BQ.TC3.6C0H5C8L"2BF-2J'-5\*J0-U7 M;3,<6.NH6L5QQ\_V-6!+V6D:?\$F-.RL:O(3KUK)3+Z"23Z#1KR3D&3^\\ M(GRHHB-G+\*BB"N7)NB)D3=/%T@%,\_O3Z2\_.;JKMA\_\\H^Y^T27|3?M-L M/\_D-L\_WDO^512R0%+P%P|))>9ADDY\_GDA.0+&8G92T9O%W-PH5-HR.9^M=0X5\_~%PH@YE\_V;L0@&6X/9@\*\$VY1K4;D\_QFY25L|> MNDEF+3ZUU\_+R58CG-BD%|?>6|FVCU2"!!BE,;&9E)\\44"QSQJB5%5 MF8@GZ^>+>PHW&%R&;\*^43WFWNL|&)>@|8I89)2N9&4B&KQ03?^(@^M+.G+N)6(M\*G6SODH))H);>TE^TW|7;#\_Y#0?|SH^DOVF?|8?-(#\_N=1 MU^7B151|Q|P|?)HJK@5;DHF,M55\$0\_K2FQ8,D-BRCV7^V7D38^8NVH.MG+|A>JNENY\*6-9/&+ M(3E6PRBCBW&A.GS(>87.853\*0Q2E2B561V:D8W\*5LQ.W;%(\\W8MP.XJW2U M2GK|EK)D|\_4.2&9ID1)3KU9Y6IHR9\$CS-6H4B923BB22:2TFX(XE%TB%26-J M)RCMV\_27|3?M=L/\_D\_!\_P|SH^DOVF?|8?\_"&A/\_61|45&1QX.>%A)& MC1HXA4.D;58J\_QHW9\_RHU&&&DR\*0HJ|QB.P|S4\_X<9'E\*G/RE20S\_VMG8L) M3."1W\$B9GF/42NT@\\DGZ2N70DWZ|HRD?>0YC\\WCKY>1^HJN/X\$Z.MUCZ2W=|KMA\_\\(6%\_N^TENTT M.O\_2|8^2|WJ% A\_-O#N|VXAW\_=-0| (JTU6F7""6,&P^NT" NFW\_ZO MITVB?^003DXC|FUI M\_P|QZ>OP^K6EY"|#Q:~0\_U^GN>^\\L^YS#GZ. M>O6@)&T56K#V//+1ZEMU63\*G7//=7C)8.MIOFL("BQ<C%G%L MNU4%LS1Z44A.;D7O|DS;.)3@;<+D"N1F1|D&S6U5"T8: MX-3&Y48%5Z^F0D\$<\_CTC49FN2.LL\_//8T9W2Z<->VB24F+9%2T)\_2N34FLL MW-MP.8E9!12-CWZ|MA^01%FV1|);N(K6|A M-7"%QV M5|J%IL-YR3N^R5M@B,5K-LK-Y2V|#[U-K6^R+MS.HNHMR2LBZ|RN^F|-SM/Q^LZ@392I>XG9AB^V4 MC.&^7V(WZ^\*JV.ZV)VR-\\NURDFRD|Y&PDAL3V^@K=%U6SK+L(MS;5AE!S3% M^XK7^J3:1UDD^W#;NMKQ|J7=.9UO5E|\_4N<&C\$C8|%=) M^622O;Y;LC)R#R?R#7%7G9FRU-



```

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M'G#)CD),D9B20M'DJ&1+RN6GCEJ8>5$D4W1&5L>#?);!E89Z4,NW*PEL: MEV7D">=>870;-RN5[NFD]J7C);!":MIM:A>V^*713O7)BN,9M"H%6;4)8
M#WJ50*U;20M^2B^42-D#H474WSECJTM#%OE+)">2ZLF4-;$SYQ^4DRCZ
MZA4&:#T>7;)@C4VS>KBLR.T"-KN0\@8(PW8-RJ$>L705|O:|4;S'-WJ);.I.O*VR_05@X M%:"DCP]JNNV4N& FL&;(;/Q[NQGS$M^QIG?;S#/[X]W[
M:AX["-RL%>D8:@UH$)LJE^M^UK&RSE1%4G-M-$;%L|,3+MU^!^9792^A#2-0QS"6"MN&#A9.-KLN|9)U3["-H M?^_>YV+6X]YA(8P^/0H%6%
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-|*S,WIR"-E^MW#M98I52*U&;(1.4GDC1MT,R-UQ(VY3LNF,6^0 M<8K^Y*;-UJM)N0K^NHNH%0KZRMJ%["&G&8E|JO-!&*BDH3F|D[1^Q^]
M,O)V#;B""$-S4,VWL,85-M5^5QC-VLH_P^!E8M^O4&4SDWVU1MPVL[|H%O-M*BXSF^C-M1;0^1,-Z?9V;B^FW^!
(%7CG*ID_8*HYPK#V.NRL|5+!%3>9G|(->MGJ MB8?JK5?D|H@;|PB-HWC$2L6A7-BNLOX,; MLF_9GGY@P.F,ITYPHG<-
NOG<VAK<4KD$Z.LM%P:EE,;+T-333MLW(MDN64>I2EBB^N%*P<+12"/9NW#*+4@X4|N59_,AHJ/ZP4J|MD|-Q?Z2W:-|KMA_!A87^XT?
26|3OM-L/D_>P|QK+2546W##X)P&E8I&GE M8H|;-R=AN.C36X8K#/#O49G8(|L9AN(XS")@Z+W)"S MQ^W#;L@V4D3NNV3,EY%CH&NDO*6$;-
W.R|^2*NXEGD|P&+D|+23TY MA|P|N8-,|(HHMD^T16-KJKO8XQVO?3">0H|Y9S%Y3.&69)S79$SQ^K^;|M|@JB8BAE(B2D8QRDZ^NU-1SUVS-H+
UCD;7^DMVG?;[8?^ MR%A?|C44^FUW^K0-IN=-+2*8TK%H@J0J|A|^J45^RT6|ZQB/E+|Z@>5- MLOV2JB?);*LU#DY|)C^+^25+!85J/X^&}>
(XI+^54FB|6.MY1F+W.P1XV M$^V9^9K^QI+!N0X(^)O|HJL5FU^Y-FW6$2S-G).CS+4B|B#$DQ2SV^3:5B2A M@-EA7<4^VJ3D(60?
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M&OEQN6)H|B7FFVB.#G(|Q^;|C,;2ZE,3,E,C%-B3NFCU_-Q^KJ&1E.-N6.PNLLHC+M%U6 MHW-I&Z0D|E7-FMBW-2EM&N6TCAB8LRA5<3;3K(D-
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*NY^W15$;T.L92R+ C3ZRM3*RS9+N6Y(-I+OD9,|;H-D)2&)( MMVS|JR-$)Q|QLV<1PM%&Z(DE1L2WYX1W1J|/PQ
M.YZRYQV^N0^UN>N4;SONZVAG;|814;C952J,1K3IAG>5-2 JKAD&KE%TY1; M?H<1W;1<H7$)W&^Q|8$K%GVQ4FO;C|N5+L^#;6>?
^9UE2U552PKFB89M7"E9^UVY2A,H^M@-5,HLK(W@XX696)^H$*NL%361X.,F"";."I8@B6R""BS.01U!>4JQ?)
MLYW8^ZAVVR=F%G)5N^WV^H3%F|J9^O+&G)7SG6"XNR0K;Q@947:-( M?^7FO_)0SXOB,F9$C<=%7J132|2N8@FF$@Q9/3$<P(Y:U$R%
@)20L|2 MPPR$EXHRIHW@SON$5X|!JH&@>W04B^=5 M5^0.BJ9RS (-7^RJJRGDIQDB)9!&1-U-8)(D_170LF|(8N4120^0Z|
M^#@KB(0;$BW0.%Q-US+*& M|?26|3OM-L/_)"PO|QH^DMVG?;|8?^R%A? M|C6^JADE8^J^P|P|(PK2T@S@LPI3^-Z8+
(2*LQZ55P>QD))"-MA?HDS&RY MQU^!0K$5J#,FP24|^95V/(_PLN_FD;T_3,V/OU<-(OY M^W*1+^IWVNV^R9%A?
|C1|);M^UVP^0L_>^&LP_51S5FB>OP^P|^T58& MAYHFA58|658FC53&%K^*X^%0^(-1M&^HP_@SOR!A)FVD$AWD#O.PDY1*{(
M;01.0^A|0^X.GO<^ENTH|?7_X^Y^PO|QJ(-!QS0^7<1NZ5G^51K|)KQ|HT) M^FA:S(M8B-);G,D^X6C1-(73A)FU(LMT);A4$@;
(|#K6^|X>91^R8$KRMVQ)VX&|V|&X%DX>R-#(-<2<.,MKIV,PV^5&^U^HRT^GU-Y|H85K-G#>2X.N8R;AE^W^8SM1H-TFQEBU
MN^RUNJDBZ,6J6;,$6DB$7^NA9.E6C|)NY|)91NN4@F^6O<S%#3#D^MSR!N- MWHYQV^P4E@&R&$,PY5QY^8|?
5+;U(SDJ3C^78UW^WM4E9&DJY85PMXK^TO^ M_P^7^C76$B|DC(H267^%C|9K0^WR9^*_R:TQ37G^J|60?>$WSC;Z-A?P1G
M/>%3YA-)AR#P^N^1DS%MUP_-L5OY^V13USOEKQVHZ>P9IW;G^H9^R!&Y1NN+^N MLR-;6(IC(+8LR-!73GXZ%-V^V^*K%1LDV9,|BYWV&;?
RBNW^)|S|^/ M5BG;E+R<4 OSI^+4P19IM2D,^7521R-0GD;|->U343;KOUZ|L_3X?5JSTFFJ>X>+*8_H,QBG=WOXP MY^8YV^5|Q:6^F;Z^C/<54?
(5R^C;@)S^2 TEEG|;296BS98-G^S|SEB-MZ(C|LV,^+2_O5$FM1.K1A+<+>.;J9;|X^4O;J1>W7.NUJXV|^ZM7-
MXS5B7.^/6:OK^ED^HR^V3Y|5@FSO$9M^)*R6P2M:1USW,E%OG-Z+C4 M+<3|SL^X0$|J,3C|U-ZG;9;GC7;1>*W&SL:EC|)M1PT"+;$|OOU6+^E^VY9
MQY^>7U6MW2?>PJJ_2EW|<.,D86/1831Y|JWX1_MT=0<^7B(^X^>CRY^O1S M|A^W^-TM#-CQ8MH&TU85C)<+^9+R%&H@>
L2)M+9.I.TW(LQ:3LT^QK4.FJ M1PDI243L4R-|N$78,(UY4|_BY9GL058S+8F2&=-2TC|TZ|H<|L284;DGN& M^ADNZ(-
W8+OW;|Y/L^Y/7N^|TRX1*^B(-&X/Q|H0-W>>+1O9WL>@>G.U3+^A07197(KY@<#)*)%FLG2S!NK%*M4%5%74IL9
M5%$46;0E95DYLBDWZ)9CTY9&0G;^E+I>D9Z459@ELV^)-HJZCQ^1^RMJ&VF-4G;Q$6^3^K.MDUG1%XLB?>)_C+;
(WG+CW%6L.V!ZU3E^O^*8X@HV.3ZRS2QM>*TUD;/_M6)@R^O;ZS+Y$C7SA_$(^/A^J^K1-8G4%01^@LW!T^Q*-(IDU^@1Z.Q.*B1
MR+D5^&;&NDU6KA>8(O)H|L?+42|5L1+;F|""6M5L2*^@>.,$ M1^R)75|_B|)^U>N-9HD#%69-6^NESF|(|.B6UA!_6 M^
|YK89UV-HB_K|V&=&12PL|S$34YD|5H_ACY^>2(TQ,5^>7X^U M(CX^!L5W^YE_L?_HJ^PWX
```



<<U.U?."KB5+!\*L6CE6:355<"J?)"F#2P154)H!\*\$ZAQB+G6V<<@Z.H"IP.M%"@ (F=-7A-^J1QUJWAO!%P%;MU97KRY[P@K-2ACGBD1.1(-%<3;2\_N-FMALCG,=-AG\*03XKF9S?U7A[P0&RRR0Y05HN]JV.Y)9-NA?ZU(C1\*5WV95AD! M8JJON2R+(XP\_SIXF6/+7-1MPPF\_@V9!?:QE6@LG4HTC-[0XMA]+\$0M+?8B.M-MWL%9IA-9DE#HKR4BN3SR00BF\*CE4BLV7SUCSAB[X<+{?\*)F)?.-TS-N7-M.PO>5L7OWE9KUAJ#R.\$)=2IX-R%-{I24GJ8"18R6K<0YE}W-ZV>HU-UTTH M6;28M!-YNSVR[!JL6 MD1K9" T>H355AA.7:TR3)L61DG<@REB+SKB\$8)R[4%F4+(-.#],?^Z;OU M8-U19U2W#57@N+P7\_<\*V>+,,T0S\$X,BM2R?G7ZHC?>"S@<3697+9K?P9B&+G4PTJFQ=S- M"N<4LF3XG!1-;?+\*MIK+U-BC9A0FT&DMS4.C2#>OV>)E M#U0ERDT4/@X>6EEV2;V17RE39(V;IEV:42J3>1<?T1.D- M\_!J1P?NZU7.%A0^N13)-NW6;C9I6LDT M1(SDY\*DT5\* CV8(-%F+&:F&D;0%<1-7X\*2CG.U&?RB(C)T1[Q\_?J(0^\_J5 M>?;\$<87C(TN\$JU"&+UGIU=(\$EOB>[PVT0\$S\$L]FEXPZ8A\*U=KRHR;=5\$S>+%;M"\*D=-MCK&6;RD+; &95E7/-H@IPZS8@J026;BQ00J7DD-[?JC'V'63L\_.D@#KKJJH M.C(U+QV50 R3]\_.P!@=-;>C 5&EW"?0Q)?G)O->HZ&M^9-PV"?;3BO+ MTNPE;=-[4^%FL01Y(9+!&J%G%];KE%5JHKXPL/MW[M]083+?L]>-RV1]MQ&G;H6V8,6SF5KL.K[6.P1D9MF#&%.;/49;AZ17;"2J5E6(DH!%57L:\$ MU&-H1,XD&DW!;"8L'AM9?+OT,0QJLHUHRCN>X=-Y2J91+T^R.;BL\_5'6E, M<9\_I^"J9J7S7W\$Q(-QQQ\*2,S62@Z^A/.(5;\$XM&15'32FN5<[JWS[+ MY/F?>B9K7 L&X0;JAAL>93P&ZK-BQV+[IGJ,B-NO^YFPQ?>M+VWSQ[PIE^M^N^EJE8490Q;UW%<4>;DU..>X3(9X"J2R667% V5FC-B.IPG;Q0&:"Q"YDY+K^WO)/#<2!>;5A-XQ1C1&IML7J(C. M5D=5[GF.SY5Y9)>&MK]...XAV(A^VEWN^F(G%;JAU^%N%GFG;]2K(P5=-M9KNY-^>0];>5[6JJJDE\* @1@<#)JSD2N3@U^3&V?<+0-UV^!8;BL616=-N M6ZPWMM2+FD4)B#HIGIG3!51,4)\*,792S15?>7M5U- M1JJ86J7S,OL>?>EEFPV^87BH&[0^"H))KOLYJHR!2T7?>2B"J3CR-Cl=-M MV(W^0+6GSU!F>1SK>0O)&+09N6\$,[VY-ND19H!%D^RM,>K.QM!Q5 M^;R0B9^WBK&^00"XIM]M^P@DNMY\_U>-(76FCDM;0.(N3..DL+^C%:.LS% M>S9=>2^XN6;U!\_6Z4@94^,7J56=-MKR0X1&+KIHZ.&0LL5J+;;OHG[?7MGR^>M>7KVPVEXHIM^C>V#55OC)C3!77 MDL^5;^XL7^7ARCBZ8^9LW@J^86V^TCS9^T.MAAG[MY>TVS1H^?M&=-Y.MWML00)\$D<(V^UK#J"(Q^\*T<8YFU/OJK[X@((Z@>@R+L0?2#Z#Z=5F1(.R.O^T".X@]@\_0@]0 M1Z0-B/2-2^PO^M#BS[VU#\_6^UDW6,L+\_K0XL^]M0\_S5BM9-TU)]TD-EMHZ MDP?<(?YJY^T:4,8"@ (F\$^`\$1\$1^`" #F(B(B^`!XCX^>)/(. \_G^X;B^M;|^="EZNW2Z,7"M3>/-20HN7(E45[95N5S(T;)(J+7A MV[!%#7;9-5(&Y^>>X>S1PL^%&[5^>@;GV20^>)(^JDG;6<-S!\$0^Y@(@O MY^!^N^R!:\$ #F@ (UIS73Z(-R^S;B<0FV>NRNX;&"5CHELQ-MF3&[PQ^&9^ MI^<B- R1195^M57-HC^+YBF;8>&+DYB9+6/6L]07)+BS^3,KW2N8 M]H?7;MW;..K9)H0%&)/^S>N^C%3[5(.FK!BW)UKO7SINS:JJN^TDSI M^W??1\$FRK9GK^&SGR^JQRQY^P^H95H^7;N.ODBH\$9S:-L.59DYKT#&MJ MRTE,UMNQ^E5+1BC&80-IS-(-D.GKB0;0]]L^91QJ;ITV3LQ;?>S8U9G MEF([#^H)+7E^=-0U3NC;-D;^JL)/R1WJ.LM?F(070[H3;,\$)B(AXN7 MT^C7)"A^FQ9G^R3^QZ;7TD^93)J2^JHL LJA8Q^BI(\$4N70 MH^X3312+UK-DL,FSP]2@AN^5I94^3I+^\$M7I>ZW.R3#5H]2R4;\$GA6^+)T=V MP.BT;1;^LU;A.L&1\$4TQ2U^U-(P;IG3KR5%A&TXAY^PUK)YX^D0LUQD6, MN!>..M!+Y^F+E1M(E5DDFU9%%-%10\_>15/K5:5^6VT0^0Y(,.)@Y>^MKUD&T1)^U.VD&^]M3L65A19L7A5HQU^F(6%0)-9@B-(JL)&K+&CL0M4; M0M&JU60!7S3]+V.D;^A0UUM<^95O^K@KO7Q\_?7!O^V)P^F]1\_9PF(2Q^M^C"?M5^AG-GKD-S^G\$+H@V(YBD)J;TJL2R;R)3JF;+).BH43+^%TG\_>^&Y M^Y#14XQ^S^5?;4FYERH0S0FV.N5^B(FHNE1273510H^J^2%4514\$A&W8E% M-.R@!F\$^..2WS:-G#6N7>NWFK-4\*@WO^DJ\$ECVD/Q^>^MGJHJ M^D;)^NW^2GDQ3^5^91R\_-9(JYC]L1,X5EJQ3JR2;L"REQV2QH\_(!+)^\$CQ[2 MP1JC&^"..E9-NU3E@^\*;>XKX+XGF^XEEJW;EOAS^PI\$P[6;UR)]#W>XN9F%>T%<6J.; M8/XQ\$7VJ)4&L7/2K=-%MU^J&2(+A).P04%N[;I05!^3(%>O\_@7:52L5B^ M10L^0I0,-YF;)^RW3Z^EDF[!^NDT4(!>(-(!S:KBY<1^H<PT7;JF;\$99CV MO<\_>1>NQN,54,98JFTT^Y8J-S7BD0(B,1R!GBY^QQ)O\$(Z2518H^9DVL14H M7A+^E(C4L5))LD78="PR1U8I5BAY!"/Z\$V^CXIP?M89?ROCFNMW.0;/R MTE?9YF-BR31: X^HRJ\_#3;LDYDF[!>20F9Q.HIQ/E2TRC^S;B7=18+)^[42 M9BF(A2E^8/R;4^A^<?#W 8?QKA.B8RC&L-7(C@UHLF^J)MR@8D>?>#^M^F^5% C@=-S4\$7^R^>^UJQ^>MJBUPCC^4) [(H;KLJ)7-CMN68DG7G7BK.2<1YV\_F9J)HK%^=YY^Y9G^=1C\_>^M.(6-(E&RHH6^#BJ9)K!X?LG^R\_`WKG);9.HTMLGRX];5D\_WA\_2?Y\$VQ4X6^UFM\_?)DK\_)K3%+KX6^UFM\_?)DK\_)K3 M^%[(M>^>)OG^T87\$8\$WA4^837AS(!)]0^M1DLX@9%-\_2;^A\_&[5V]A7K MMJLW:2S5H^358NC;^X43>H-GB2K5=5^J3A.Z1S%/%-RP;O'D;I^8^H"QA5 M)2L23N<8257R-F7)Q\$VK?X\_3!^H(CA^2!7\$F>E6MM^XTDDT^5D5O.Y\$D19/MM9>=^TNFEV7U4X,QXD7+JSW^!>^O49N6?OYB1=V5%\$BK&3L=JFSNK)9G1 MG^"3115TY9QZ+YV^?%LDBHH1)Q%EF\$S8IRS+Q6\$9 NG.L!@T;FF\_8HH3Q21RBFKJ/^&5CUQ@MDT0YAR;E7;V]@50R MS/R>X^JQ3IUD&JA6<J4VIUP9VXT%;(V&#L<8@W.1HK<^N61.D#8ID+(FY(C M#QJXE6+(7+F+X



@@@R@H@3J5QYF-+-@FD5350.V9(MID+Y+H#%0ZFFV+A#-BK\$%)&Q%9JD)-@ULB69.HN\4L6I5(O05))NFFW;M)@#@F@F0-Y=-? WC\*ULS;M4RI0(\$12\*(\$TR)0\QCX\4\*#W\2V2I9>O MT-1BE69UC(RFD)YMS\$N5+HID;+FN%Y;B-KA19YCG861G;N.S1JS?> M&OOV2'T-3RM(WLL>@L\*HV51Z@H?MHT-&I.F&EKA-R<7+@N?UIDTRC2UP\_9-EAIO7/ZTR:E5NZSIUD7JLR M?P-I&O&B;7J<+ZS6@? ODR5^?DUIBFBU+ZS6@?ODR5^?DUIBFBU]]6O?=\$ MWSC-+^+9PJ?>KX&#J#WC?SM4U4WU0>^+JFHNK1J@AS#\_/?^?>0 MAU76LUYP;XF-7(- J5A0-INS-RN-C7(INHPA'LZ@VVC7SDGKC-WKIU-@ MD9B YTV\*12UE-L)FEK\$-6.B6NE48LLRR+9R M%#EZR64DI&RIPH\*X-X Q/NA(DM8G\$MLXD9INQ14:))Z"2UYI(OO)\$;@^MI9@%\$%\$M.SSK+;)%% #M91C29Z?OE&Q\$WJ+==8E)QRD^M).Q%KA)J5HRT3"/Z9KE7<5> PEO7QCGF&DMTN<6B;E>IV?2@^XA^\*1MPSG9.2L\_\*3-B-BOD-2WB;-9%56014-7G3\_P.WH-28-P|H|<\*UCYI+Q5NOTP)U+>8VTOY\*2;XQH-N? >S.K1Z6K-2S-IM%V.I^QZ#H%LA M6F|>A+1|GMY&IPY2I5-BOI:CK5&AE;(&)TB4C9T2LU@CD.DA.E%4+KFU:C6R&9N/AZ5A:4LU-2S862\_-XP)6< <==5\$Q/LA|I-M(-G/MRYY Y M93I4f6VC91C9CBK;1B2JXOJK1ND-4AF)%+19738GIYRM-F<@K-6A61CNSNQ9B=(:J)Z^M^V^?T&ND11101K%#&D4: J1J150;G(1H1W))>223U.CHTE;TYHT-& MCHHU0?#87&JZHAA;E#61WCV1\_P=-&NPAA;?E0AA;E#0AA;?E0/MAA;E#6- &ETV/7QW>-ACV-^2(U+S.V+87.5#F:1 @4\$)J-&RQPSR;#HZ)TB MF5(7O404\*JOK;1#>@;1DW^QE3JV\*N.42;Z>)"E|2)MCGYQ%ZFI@X%T1 MPF3#FQ?2 +FI",Q,%?N5\*JK)8S>-DK2Y2@(>U6.L9U1-Q.Y700SY8Y%T9 MQ^1K-\*1%58H#S0-8MR-AFA9-C"Q-WAB2\*93)JIN43&;44S;Q.D1<\*"2(3 M#U-DJOY0- WEZ>9N<J.PPIMME(EC2-67H+G6|-1)15H1)53JPBIV#%;X-Q-M^W9F3-R-(J75WA26Z?CHTE1&B^M(2&+UW.X+P2\*93LQY0-.H^D<@V;NE9MRV- 9X(UKW-C;1;6\*50H1Y+QQR\$>S8S(RB)DT6?#>OAI-01-72XI@90^-IY44+&1RJ|WRT##-LY;PPK-1CNY)V(E)QP4RISGR::AT# M1C&W-8QA-L8S2B1YJ(FQ)91-K?O&B16Y%2%#>@VY?93VW.QHN3VY<@SJ.8Z MES=50%K3%>@;(MCSL\$BE\*1LR;@>@D.DIEI(-64Y? \WBICG^IMKV>@WI#X MIM8KXNM#(TI@V+1L6>QY^C.6+J00=-FZ?NBQ|SJRDN7+;S69C(X"@>A\$ M5\$2\_...>J1HBI&A55%J1H H^9S)YE(1.A2\$4"\$OH\$Q(A-XI\$\*%>4H M-P%\*"-(-0-VN>J)O2^Q3.DW#XIM6.WK^OZ/IMI|E|J+V6B(Z6L|?3X/TZ- M^AZC2CIV4Y.V823FSF|JL7%>@M;B669JE6Y|>^R5PB)XELV7%G5U6-M5CF3L&S3G?29U92>V120Z19H\$7GEB0KE)V55H@#A RID%>CO0%<"E5% M\$OU\*7:4O5T>F)T)8PC43XF>+6MVVZU7\*M%!(S13E1)|>C^R-8K2)-MA593%|K|FZ&/#6@L|EVT2V3\*PV+QEN4J0K&)D)FD;J4=@S<|MON(7I4 MM;JOE6+G3JM&VRY M-E.TUJ|/F+T;"-HJ(CG|C2D>F143@TDDC7?39T9 MJ9TS.K(V^C\$482\*\*\*0(4CG9^SDY67<2L^TCIE&S^JS-Q8:P40;)XU)3G4 M@LH4\$;C;-05900/M05\*#H.4KTUA^& &C);P\$-JF>IR^Z%602A+^PSQO4THAA^R52=\*57 MP&Q=-5VCXM0.K+N^W&K-CTC^RJA^R)JW199-W(1YV1:2>S-WA;WN2>UW|BLN^EBYDAT\$SM;=ME MZZ0-V%DEH)U+9&C^R-"&+NY&A^65B^E6M)+\_79FKIDMD?9&|LD|0RJV51M\$P#2J6;TW|(?F?;J2D-R^0HRCG|#5X M7G^TP3LGIDODZ;L- CSQ62:Q\$)5QO2Y?@H>3Q-7;#5A^2I4-6S)9+H-BY M213+\*JG72MCR)+Q^\*MSL2+1TYW9MM%Q7MLQ^CO^T^Q&SP13L>\_U.T^&BSJ MWEQ@C\$@B5:3M%M>LU7J-BR2+K+\*6FT2DW:1Y+F?S3SQ5PBIC(3?1>18 M@QE&IVD9&\*)(13)<2^D4&\*1&C+H)F4(UYJE-IE%JL6%:SPX)^2) (>D?NZYZM42(C&B-JMR(H50F?%G8#>1GU)/G;DEB6HIVX(&\*2W> M-1>J|PVT-IMMTV^G0<@Y:AAQ#OK)QZ(PE\_Z9A)J/U##B^?63(BOWA+T MS#ZM:GWU6)^0->JDO^2->5KYB34BL+K0XL^JM0-S5BM9UC+^ZT+^MO:4AU8K63-22-)Y;2\*IS^W^^C^0<3%PYXAS(-);-/JIS^7X?7?T;(-I PD^H|H|T)1W\$CW8?O-(8RTF>2@+>+5 M.2)@N3J|?15%Y^M3@P2AVQIAE-|66B\$>S2F:#+V%G%3(Z)2;G6J^06Q;(S.E3TPBW-1@7)U MDZD4-LHEIMJ35\$;B;B;T^JX^D^J+2J)YVW<36G&L+8JAA-W4YLLH>6/MJIRSG66ETU8- 5ZV1R-I^J3JUDW-Q(JU@YCTHU^L3L^G-ZB5989\*4WG^X^0-M7>+SMK&^0Q1+8>J349(Y(NWC->M\*5D<N^T^27CQX19\$(AR7L3J2.Y\$ M@JK\_SUE#^H^W^WR5NQ\$;MQR)G^:F8&L|2;QQV;HZ#<(EL5ZN5NAXQZQ@V.K.M>S6+8T>C-W4@JHD;)^C^EU."GTRH+ (YL(MFKUUA->1<-76R2+1JIEUD^\*MF0H^EX\$<4.D^Q|D^W:AVAY>2GR6Z1.IK\$XL\$)). R>4O&YBBJ6MFY4IU>T;SY^\*L.5GM9EL0H;^&A+7(5>QY<E.L3JH4>HC(Y^M^45L#;L:8FB(U^((@8YFDS;I(&\$&|)SC9%\$@\$\$(DT;I\$2;M\$^@0B\*1(4^ M^A0^#J942%J0Q(SG;-NF^X@^E7\$ZH^%#EJNK10K1T^Q MLI&V2;JS>ENN-7V2ITWV^UK^FY;N^UIDTRC2UP\_9-EAIO7/ZTR:E5NZ MS(UD^7JLR2 /P-I&O&B;7J<+ZS6@?ODR5^?DUIBFBU+ZS6@?ODR5^?DUIBFBU]]6O?=\$ MWSC-+^+9PJ?>KX&#J#WC?SM4U4WU0>^+JFHNK1J@AS#\_/?^?>0 MAU76LUYP;XF-7(- J5A0-INS-RN-C7(INHPA'LZ@VVC7SDGKC-WKIU-@ MD9B YTV\*12UE-L)FEK\$-6.B6NE48LLRR+9R M%#EZR64DI&RIPH\*X-X Q/NA(DM8G\$MLXD9INQ14:))Z"2UYI(OO)\$;@^MI9@%\$%\$M.SSK+;)%% #M91C29Z?OE&Q\$WJ+==8E)QRD^M).Q%KA)J5HRT3"/Z9KE7<5> PEO7QCGF&DMTN<6B;E>IV?2@^XA^\*1MPSG9.2L\_\*3-B-BOD-2WB;-9%56014-7G3\_P.WH-28-P|H|<\*UCYI+Q5NOTP)U+>8VTOY\*2;XQH-N? >S.K1Z6K-2S-IM%V.I^QZ#H%LA M6F|>A+1|GMY&IPY2I5-BOI:CK5&AE;(&)TB4C9T2LU@CD.DA.E%4+KFU:C6R&9N/AZ5A:4LU-2S862\_-XP)6< <==5\$Q/LA|I-M(-G/MRYY Y M93I4f6VC91C9CBK;1B2JXOJK1ND-4AF)%+19738GIYRM-F<@K-6A61CNSNQ9B=(:J)Z^M^V^?T&ND11101K%#&D4: J1J150;G(1H1W))>223U.CHTE;TYHT-& MCHHU0?#87&JZHAA;E#61WCV1\_P=-&NPAA;?E0AA;E#0AA;?E0/MAA;E#6- &ETV/7QW>-ACV-^2(U+S.V+87.5#F:1 @4\$)J-&RQPSR;#HZ)TB MF5(7O404\*JOK;1#>@;1DW^QE3JV\*N.42;Z>)"E|2)MCGYQ%ZFI@X%T1 MPF3#FQ?2 +FI",Q,%?N5\*JK)8S>-DK2Y2@(>U6.L9U1-Q.Y700SY8Y%T9 MQ^1K-\*1%58H#S0-8MR-AFA9-C"Q-WAB2\*93)JIN43&;44S;Q.D1<\*"2(3 M#U-DJOY0- WEZ>9N<J.PPIMME(EC2-67H+G6|-1)15H1)53JPBIV#%;X-Q-M^W9F3-R-(J75WA26Z?CHTE1&B^M(2&+UW.X+P2\*93LQY0-.H^D<@V;NE9MRV- 9X(UKW-C;1;6\*50H1Y+QQR\$>S8S(RB)DT6?#>OAI-01-72XI@90^-IY44+&1RJ|WRT##-LY;PPK-1CNY)V(E)QP4RISGR::AT# M1C&W-8QA-L8S2B1YJ(FQ)91-K?O&B16Y%2%#>@VY?93VW.QHN3VY<@SJ.8Z MES=50%K3%>@;(MCSL\$BE\*1LR;@>@D.DIEI(-64Y? \WBICG^IMKV>@WI#X MIM8KXNM#(TI@V+1L6>QY^C.6+



MO(6-VQYD;+>);SRVAIO77ES6W25EM<]MJVONI&JP^X;E\*\*\*CGI5\*AK MG+(TB\*MG=OX=S4#OGIPG&4V>6-SBR+@FV;YF?R3ZJ05%;A,+6N>F<+<...K4T/M<[SBAI+DF>..XS\$S\$D?>UHE\$WDE%R\$Z(Q12HRL4C+DMM 2B2 MI OM;JT-)@VX72J0NB HK ASS.\*<..7BVA3Z\$3 MMSOMJQQ0-QE44;1>OZIS5/\*=ERY=\\@SJVQ..W495C.A9YMK\*%BFF.L5P \$5\$7 MXI4OQ0.IM2RS.82VU;CZ#M&KPJ2VIE\*RI((IG 8DW\*2E+VJ-Z&YGK0EWSG ME..Q5/RNRLZ\*|BG83AWL/R^N:>=<f-G04?<X>/(QI^0^\\D8 YCR>8IH MZ0 V2\$>?P^?O>CW-&C6LO3\*#OMDR3O^XR|H-F^<88URW@&C1C7; E6\*P)M7\*%65N7R2>Z>..>SA-&Y-M7&.;K9D+>J5R;R;J|H\$SRMS84(HLX>\*H|>..# MICW-7DIW9CWC;ZL9V &N? X|?F|= @.M^ #2.5+TK:U7%)#..68#SDR8J:A MN,VVZW7?DD4U+0?)H^YX:.\*>?Y ^D/ 5 IF)U(J?25;WQ#X|XNH M62 IU WE^8DUH/B24C(%OX>.>C/ KKE^4Q+EGA9ZGZ.C.ONI^D&9H&M^M|87R1D0I.J5MV3599PP^&QIDBIH^K;4AU8GO|V<^Q^63\*~ M>^/QY^8B(CRY^XB>.[N|^>FLNDG^MOE^4B#|A# -1 (&M0W&-VXKC6);[ M|)&.-YG/&^M@6T^YS;+;<\*\$6RJY.\$9IYD?)UI&O M7^N4&L^Q|F/O.@ M^\*G^VXW-F3-V|>=FV/O(>Z/OY#S#GW^D:=UJ29 MRNG%AJUMAF=KG7>63(=PIY&(R/F^4)X^AD.\*8X|MT)=|BX5RC3;V2Q;76|<+I3)=64L&4X|?> U;ZD^4KK>^>Y MB-ME-R92E4A<+5^&8&4/M^B4H^W=^GS\$|K^V>8^/O^>^O^W70(;\$CB ME^99;IRN9?U3N|SGR^@AW^C|Q@/43;UBO64-8GA@5CRJTT^S\*.;H+LJYV^M&^PZ|>..J2F)TX(X/S|B)W!&=GEUV|E^&GDS+^+MAK(UOR 3:CB/##>V MY\$2X^>Z\$7). "YK\$^S6?24TT.6R%>HTL3&^O^G-ARY>4% P^T^W^2<+L/GJGJ>+L^G|JG|&L|@Y^A|@ Z MOW<?2^W^6H E^& PAI+P^M^M3|D^EXOC^U?2\$ZLK^%2S;+&@ MVEY@NN>MGVJ|K#65+3^?Z@|X7|>(K/D2CA-U.(.5A4+H;9WX1..?U8GN MCR\$%>07+GSf.1\$>7+OYCRUGRECO M;+XU^TT UN^);BK^CG? +D3(F|78WF??AMON>P>\*Q/M2|>+<%7+<+%TC<(3 M(F1Y+5 CHZF1TJO@#;688&7Q; "W%RQ\*>UB8RJ.F;.\*%>4KBS-2PL@YLXAU MOWSX1QWAFD|T.-82HX Q2|0^WY\$|P^OY M>^AN(RF6>+1\$Q^T^H|@Z.0(=-W-WB^=JRN^?2D^J^VY7 +..<XTO%~ ME=BF\*~1FO)G\$^O^N2;A5;D>@7J.Q|MBIU XO5@X@&D+L34\*#KF\$K;5-H W5W(X M=P5^TJ3R\*>)C9F^HL NKRU+3F6\$|1^5N";7NUF&E\* |MIV^OSW&H69A.X MBB>|DVKEC(Q4G&8ZK+& &OY.U %XT^L^1^S1VV->).6|A%1%-B|E# B#M MHZ\$005(J.0&Z1\$T.2.HN2 UIUDU^K=UGWK)N59D WA 2-2Y\$VO)X=-(JF3.^POS2(A.^?D^UTI MYUB53.M%6.J6JRV>+L4#)HE.05H^8AW|R>^>@G.N%~\*)OG&T8 M7|\$8SWA4^832QJO ^T LVW^H^PF1+ Y1MMBB)3=-.N\$|M^THT^R&XN&?7 MO&1K.;Q 2X)C2\*^#JFO6; 66%?KM3)(6^BHDD.O\$1T+ W|H^"RP5LPR;\$91 MQ|D<^>)2H;2^5;P67-LT|H^T428LQT.BZL|&C|HT-&C1K&&5RXRPA5E-GE2Y0U;K MQ%TVB^N57.+F3D%#@S4(|#BV|F5G|QRR>)AV3Z07Y&\$C? F^8Q0D-\$D@=-2 M20^..DGH^23T^HUR|3QU6>?M5J^\*K\$TUFW;GCK5J^\*-Y9YF2\*\*1U9W M95^L.G"(X B^|J5NZ\$K@G.^? 2^EQG235LAH>..=5&7;D\$;B\$42>W^Q M^HUYCL5P25.FL+|OJ|R2^G5A(B5;Y%84EB.@N^O.+5.W2H^#M;+&CJJD\$E M\$|L^XRS>^VPV|S^KO6&-ZS9&A9.N.-BFM.PAO7X|^S) M8J%VG|9>#V 7B&9W63;^H5C)-.DZ.&0.79X/&.\$+3.\*ER.A.\*J^P.&WHQZ MNZR;W6^U^VYX H-\*VT3; MK>Z FK^F4+U^4ZLYTEAKU^SCA); P|@D8RIGR|H^-J|2^<9QKA)JRD;.%LJ MY;J^|V5@D37B&+33Z^VZ8^7C)5ILZC9|C-(GC9%ZTEJ4|S\$ M^M39-L>+GJ3/9&1CZ;7+^J3<=-VC.T>ENWS9LB|>Q>0UB6?FVPW+4|F\$ M.;4S.S>+KD4YC^YIV%OCL+K%)D(2RD.+1Y0S.8I2<+09T|Q\$A03DD8-IN M2>0<+5B.GM>>^"AX4K^N4X.BQ^N? M.L8BEL3-XU+CHU3EA.9K|8)UKP>=\$9.H(Z7\$BMA+G^E8SP26RT4+&CAW M2QY^\$WEJ3L9&K)5|6W^UDIEG7FY-D^I^V\$|2 @=-SG@JZD>9K@8A M&5ONW^ (#F&+Y(J20N58|U).1AY&3KUI@2K-PS87RBRTY7^0E31>K1\$F9+0 MG3KJ)4E6&S\*~F^?L28Z2 0CIAUU^M;K7(^VJSQ6(M^4O\$X^OY|2|5P6\$PO.Y;QA^X^H|L+T9G&L%<@&#^QE^4 D& M.4?P%)4NE^FXJ6F;..Z|9(-Z#5&37#U)=WOX8^?2 DB..ZU^N 2.OJCYM^5>M&-IM^A^=-22|5P^=HN0L..#Y^|@Z..A9TR3;H^62P8A^OJUG|P|H@KED M-5-IS.%|K4Z42^|CHZM|Q+70RY|U.^E^I3K^CVR9EQ C|&L@T^RYCI F>06;8>WUNX4K(B MK.\*LSZKM+E(6(? 5J^?9P3CN P;|.C|>Z^"M|N|H|U^M47 L^U7 RL2M MKE)R8Q^#W#C^5=QVE #O;.)IV|8 G6^A0N0<4-52 1%BJ)BP96E; &C29Z3 MP.|FUJ>0Z0^5FWM^A..WXOQV6 M9&L3^KF1^\$=-G0R^3Y \$R+^H^H^N|H^XRO8XN68V>+N-|E)9U;.(J4@Y|> M^TSXDY%\*3#B^). (LSS+5@WE;65R@+YO^UUF\$9Z|T^E)&JZ|=-9) P9(\$142 M.3JZ@UZ13^(H 9C|?&QM%T.NT&OL48R KJ)E|)T^MMS;L0V| <..9S%9|83N0|QD#|^>^R^9.C2>=&4C^0V|XZ8B^Q(RR&+X\$J MKN0CVMFG5JR79Z..98R3+NR.+|@P|H^TG7.44RF(\*\*\$C5\$;IRYRGECYQ(+G^?8R^Z3=)N M.O.NBE5^+G>S5^L4Q3|F4-WKE|R;.%YH82^PRH^O^QE^1M^1<OH0YQ MN3M((QVBU^E|Y^#RD^DA^W^/W#8L-RJE|)(FV(21)^.^0^~\$^A5W;|S^C^A^H M&P+J5U704~57H9BP9P|F|@Z4;.\$3\$6|&L06^OC2^YVY&Y^|MROIH|)^8^G&KKBJR@C|@Y^D^>05;..URI6L^?0J8N^LVX04\$TE>Q8N M1.;6U; |C613HNET5>LBE;EN|L-BK\$.%W|> /L5JQ.N;=-/8D9EC@###(^2G^U^R7X.O^O^\*U^Q)J0^% UH<6?>VH?YJQ6LFZQEA?|)^%G MWMJ^A;L5K)NFI^NDG^MOE^4B#|A# -1 (&C|HT.HW7|3ZD?>..K2.XUO% MGRIM.W2|G|OM%GR3(A.R\$TB\$ MJ^J5E2B6|."S|NZ;@IK-P5 U9^7CTG^)-AM?F<+1^N KED BJ|FWM56;%98 MTQO@N>M^|XN1D7YHE|1X^).(^JL^R8.4\$^R+8SF4<)\$S.Z<6|4JRRQ4AYIX M2\*RWJ|)2|H2QRYKATQ.E|H\$H3Q|3)^39P/ZTY@<K 6J<+>MJP=7>R)WZC(SAJZ;|L^D ME=HO&(W87C|P)>EKEET7N6K%>)UQ@OVR|\* (CW62028^5&8R^MCGO^E5 6%&F^=XK>?>N M)<+P|8Z2E9BT2\$BDK^6;9GUO?7DUG6;BOD&R^LO|H^J8RM6LGP&T.Q.61M MVK)EMS7\$F0LGB<<565NQ\$#^\*CQ%MXJ7|;O>4^\*V|CEVZ|1ZP>REX>MX>FDJ5+%;\$5|5N;WV49F2HUF^C\$^JXZ&&K(EH5FL1%G-V:5FEMH|)3F+4F M^M^"Y^H^\*3R.DLU>2^VX|V%\*. RK|K5Q)%?2 (V5;.&W5Y|T;T;W)&M|V|B?..Q>H&\$4R5DF^BIN46|O83^5F^0Q^\*G#@D|>^P4-^Q6|U^OQ3;J9Q^0%4G)R|RE+>(-Y^A4 MK6|TB;=^DE(|&\*8);3D|DXF;B-607^QK23^5^B)R;2%PDI|YC;JC22R2O>4^L^U|N0^V0BXH|)(R^IS/O-^L^R>H+1\$^RR M|^<7^F|(-J0T-OVE>6^VN^BRS21G;DJ&K=0W98?JNZZDO@OHN.C8U|M.5Y5^BVDD@JC^CRY&0HVY%4C>0X X-K6C^M9Q.DWJ^M.Q)(8X|HEK<+612BX0|H^E^F98JIM(L M#B^B71M.K^NZX|L^>0ZD0.C5GJ4NTBP9%<1Z^%GL|Y^HCLIA|P2)K|;Z M#|KL|^92WNN7B3)^LS%&25^RJOL;+9|6&N^Y-AX9|O8VO>Q==G>M0R\$D=8R^N^D@B^FKU(7^L MCNA^\$DSCF);|1^3<4^I.%T-+Y^5;PUBM4Q\$05W;5YV6)8H&6 IG>H)6)E MJS) O^#^D; R|M>IPL^K;+^A3)ZY^36F^\*7ZPL^?K;+^A3)ZY^3 M6F^\*+WWX|^32; HPOX(QGO^TPFC|HT.BZL|&N|H>M8|JX>07^+1HTLX=-MG^1|^#9JVL(9|9P^X75.1)%1%;IE^E53D332^QSG^4I\$;%9|W^"U^U3FIV80=3 MLY^E;H1E2CUFL>YE4|Y;YG=^@F^M^Q\$5V|V^)|YFS2D;=LV^MU^8U^A+31^K6AN9^JX.\*C("I-WY^0VY9#9;GMOCHG(5@<@6SP9W+%BD\$X? M^U^|H1E5D|>W^J4MTG&K|^LQ2@^P^2)GKI\$|Z208H|CHZQV|S;^RX7BNU3^M3G5^NV8H9Q0PY 9|W^E|^0%=>IFE;LQ;UNOJTLX%M|)OUN1LB^S1&2L9FZ MTL|8>6L;..&^#GZ26.A9^RK5.KU=K3(N6C)QD6G(^;"^3A\$>VM|)2KD

L^5#==3FUVV^MUIR(F\$F08-!+J.79.3~\*.Z|H#Z%OMB)=|51>#M%|H)0M)FX^".N8T2OBT5 M^08<6Q\_A6>+1 (%^AK@KAGB7BFM1MISUN(>)ZCKA|=@YVEB^G%PWJ^&QKDK K,8G\$H;9R%G;+8E\$C6\$JU;"X^K^V3W46>R6R^QKL0;Y9W|Q;Z MSXMMWEYGWX0N^&LVJ&AZZOEF;Y|2^AK=^H8|QK|J93^SINF4>V^QL^V^H^P^%GB MND>LJ6H8YE.5^Y L^/L^|YQK\$>JB850FJ^2X^KD.9RR-Q;Q9K9S.APOQ MK|X2K^BP)MOD|H^Y|^\*6QB^B(B^P9%I62#@+=^"3 M\$+A3@JSPUG;KBN.9WABS|ORUF^%#B MK&3GM9N>2&G5|(UX.UAYK^A6^V^\$S^2BE^..3CO@+PLE^EQ6B>MY^K^M M18ZW.G|<5;-3| ^12+W^"RI^Y2 R^W&Z#F^K^U&K^3LW.N)6^D^X>MD^%1^NWV.O4Z68F.PU|>9".664;R|+12#\$>+EJS87SIRDB>SK M<-D=%2|^8^+<+C^X7\$93V\$BNGU^"S1|V5|?^"~\$ M^MUY|T^K^H^L^N6GD@8^148;H>X^=I2 M%J|9H;U^6RPXVJ3;Q76VU37; MO6(V2.D^\*U^KL^>);|K(8.;9RC|G^VU9|TPS4>\$7 MRR6;~\*PEB.^JTLBP9F^ SO+>(ZQ^N94^UYW^FQD^6^T^H|N^XRC^@U^E^MZ|J^M4UJL^1^4 E;N^%YK(5DR>|+&L^A2^+Y5C@CLUH;LMV0FUK15%Q M9)X^MD^%V2JN^JW765|GK|LRCE9AG5\$E2P|V5D&^D#&U1C% D=/"1AU8CR9L^M6;Y^4K=N7B^K/E+!>W^E+@^5P^E.CU^5N)|#0UJSD0.G^6V?@9^H^OVD MUJEL6^9S^5 4.P2^MYSS^S.W\$SFL^TS6^KIC^MVJRLB;I-S6^VGETTD^7C M^J22%@FC^/.(1V#;+Y^LN1^\*03+)^S>8|JP^J+8C5%X|19/BE;R.M2CG|HJ MYC8P^<@W.T5+&1+UDS>=(EB Y^PIOS6;BLY9GZ^O%&#BV\$GFW&6^SK^"R3 M2\$DJ^617<=(C1DZ9TE8DMNX@QQ^KXY&6YH-6|HY(%6|FAH8YT^D.E&^1)G MGE78;)(G9K|9%G+;|H^>^12 D+&\$+J+X6XU6&8^D;QD^QAZ;BNT^Q^KX^U^U^6TU>R7L06Y9RIYR)50M(S^)|X^LPL=-MTC66MM7Q%GZT8UM 9S-|ZH5YQ9|2 MXEH^%C|8N| ^92+N^K%1C^=HP1P|N\$K)1TET2UR4G^\$|8R;8A0Y%^-8IPY MA+&6^\*6RH6^JG^5.N^#>4+(LRG5^RID=))Q.S|Y^K(S^;MV9L 4@KQ|(JGEYN0MR@;G M8C? Z.N|>\$%X/Q.M.2Y+D;J^W>OWYQ^VTTDA^Q0LT>+1^\*FBI2 MZE|VJ@^XP^4 5U0?#8?^&H^ MUTNGAZ^|W;2^ORI&F+Z71P|2^=|^&E M^WY(C3^|2KOW\$+8^357AOP=7 O/G7T; &C475HIT-&C|HUA;..X3#6VZGM M;|G+<5>QE2GUMJU&0LUH>%81|VZ22) (BMO)W9BE327D1%Q<@K^FDE(B9501 M^\$P9IU>=>#6 M^|JP^<=|J|^H^W^|BU^18\*7+L74FZLIW^T (VE^XCL2SJE MD;^|WL-@#H2T;|0IE6KUD9KY6C@ROP@RV6Y(P7FE;3.G M^4|Q\$+4P|JN=5S^<4-%6G)22-IO6L|2^+5D|>VIM)QA&E9Y5RQ^20SA-MG.F5-G|F&^4^I(7=2+8=JK4FZEFERS2\$@B;4^6^KNXULEVX^RGL^VL;H7^V|6Y^K; MJNWB4^\*13"(D.6+MLQ.F8XY>7(AX3^%9CVPQCIY&)\*O^C4JTL\$H-H9A9;1^J9V22|H^E;Z7|6%>8 M^T^C^O^Z^H@GS^5DQ^EX)E(B)9B%DDDWT>..R213.LA|)@-DNR7C3.H|GRYU M8U^6JB+E2%+YDJ8;Q2)2.VC|W7|^F22" <2R-Q^MUEEP^W2HELTEU^J%@7C75-C#XVG3|^O^H^H^D)KBA>D>#Q=0.P;81J-MNI=|^T2N1-LF-T(^Y=^L1^H^ YVCY^G|P|^D^JX @G4W;5O^\$43(0R1 M^Z3DR?P| \$B45EC8OC|9>4^Y%P5|9+12;|SG?6YVAK)QY3^MU+R22B&^E^XB\$42QB>=8ZM0V&C#69%)G M6E#(;\$ZID5^A\$AV5D(3.8IF5-Y|^H^E;DCLQIVG4^@BHT^<\*>1AR-2E M^#D|2VX8MC@-|D1|DL^WL=@9+C IQ\$701-%J;S;L^E M^\*M8G-ZJSJ+^%6\$W60^TJB^\*K#&J9N6|^5|)(HP&Q^&0%?E1^EV#)|H M8ZT@NH^=HYEH|N27-P M=-U7^Y@#D^MAQ1%&14TRD2^4@7ZJ^P2X.GPD4N^LXDR^#0.29%A8REVP%);E M.Q2&C^15028.S^@^QJO3F^W8VUB1)9^XP5B3S(E^C|W7F^ |@MW;GC3&C4^\*(G|95N^\*^|K 3.3J; MFH51^ZRK<5|H^7^F8G4B|H|5O2\$;SBZA^+V7>5KYB34A^<K0XL^|M0 S^M5BM9 UC+^ZT+O;4AU8K63=22^)^Y;? ^1\$Y^W^"C0&C^HTC3NODO MW)^T\$4 P19M(SPY@K^>6^Q;L^Y5>ISKEDSVK08KY^EUBTJ2+XO=S(M MU;#2^MSRJ(L|H^Y(^)A5^50XEFF8KS%O|4? =@/ ^###U5YKB349EQ>+2Q MMV^R<95J%MGRI85Y4A56CEK#0>D9K9\$;^%P2T+|DR+MH2^YD7^95E MNQ^DB8X|O (^;9@UY9|Z=^\*WIKL<#|^+XJW5BW)EA^\*EBJH4N^TC|H@ M+D^|X^A23)<#2V\$=Z%|F;R^\*KNBU3POGZB;J=6C^RW4^4@|RM^LI(&S| M7^#VW5#^+8MQ8X4;F^KK9Y^G^O<8YQ 55^97GVU^%8GZPN45|Z6LO X^Q^C&3E+7|W^@GW^IGM;2MN) M^JUMQC4(L+|L|R^)|OJ24C%WZT>W 5^%TBS@884^04E5^V^/4.JT9FB-Q761^796-7U)\$EY^Y%LIA^I&74M)^M M\$1D4<^L9RDT^\*UGUZ^89^W=WNPN+K4 R&YS(>(^6P;SF;H^NTG;AB^JSC6-M3C^K2|^\*&3X2WUUG-Q\$7-(|^\*S5J|N%|^O^CN|H^Z&H1Z4@%4EF1;&5



MBBH\$@ZE4F!%\$9V\$DK!)9'R:QOVPO"GEAWA.68M(BP/T2&4FCDL\$C9\$8#Y M\$%<[C7B"M@2(Q=-M.74X,WIU/N&)=)(/ M3B+:- M90B%R M(XY)9#; [K"]N01M8L\$EY-5J-0>7QB7(TX+E"RBUH24T)C(G=-A;5&(C=-M6NOM9CL &O CY7-K7KVV5J0IZ%VQ54.0YHS748 U4I"P16 Z"E97-4<2:4 MY:JHR-1 MK\$SDY- JP%PFLNFGET3JD5&L+U5T8J)4HH:L0>~>VR:T7Z:H5 M?Q(D:L-Z2;~# #57%+<~8SH!2H"%5K#+G-S3U-DS6E)N4F%7B#P#W@^36W<\*>JAD? & Q@YH!~2\$B:M7FC9F"J M(PRILZ#<1.3\$KR\*BNW:>"GD?%3O\*A25[SS2IG(IFDLU\*=JRW:2CSY)G8") MJ\*0BA0H45T:- &MIUMC22UP 9,+E^O7ZTR:9H:LX2LG%R "WKGJ:9-2JW-9 MIZR?+CU69A>~J(U D3:J3A8 6:T#F2OSIFM:4TNOA8 6:T#F2OSIFM M:4T7OORU(XF<~;1A2P1G<~%3YA+G+IHU%U9ZPKGO N/MQ>?7?1(WRN?=-F MX8OFY6 G\*#E6QRK;9; Z1<A7;+D3:HT> W,<^2\*+5^U70 R)KC(H D+~#> MQ-& UPIHJLG U@<4^20L\*~EKDJMTG)~#2/HZ2:0LA)0KE-A 8LW GL-E2 MLC6M4#))= J-5C9\$QU4LIS6H1UTBDY:%D2@/(DZSH/&#Q/#>22L0 1\$KJ,EX MYA682+0Z;ANIS\*G2442/IV %G(9-T,(-O!~58H2.964AHY%8 MJZ,- M<&),G@+PWA^0X@H6&X=V(##K)8X;XII'L;=8Y#-2D/\$P MDBL(D+U")VYP0)U2IBLN"298F"3-6\*LV.ORS!O6S^AQGMZN.WMYCF MO0DZRO@TQ049QFRVJR(P96 +-XR20BGT+L9".G7<>U9)LP:\*OHFQ0EKH!S M4R? AWS"!AF+U=-SIMAO;JNKN5GGBBPQ31(A,8XLK\*6F!\$W&0JU(3N M,C4G-B\*)WR75CKBP^EN1U""6&D55FG9IG(\$HCB:),B&2&LY.2LURS50-7/(<+5 MOL%&E).TGKVC/(<~9X7P JHRAFEFM=-2P-7J %69ZDV2V7<~\$A2T;N3C@)B=-M Y^A.BBV.NS4" WY36B,%7/)(.\$Q+Y,@M75ES(WJFWWD:QQZX;F5:CS'G MUA-77<=>~6%&<~@M5@KKBQR%E J%496ML[KDZIB7(MCK\$W;)3(ZM3C8-Y)4B(K42ID M5"%3:L.G<33+10HJ)UL)M^3L.0QYA0A[0^V-SVZ6S(K&D" FR->X%G7WV M8YFY5-%&(2&4,@\_FLC0M@~N&B<5MX)S&OUH<~U^QGGD M)W0PDO47B3)15K->#QAF(L.MW:18D66HLS59Y96%8ND<3@/#L-9Z-/BZ MQFL 6IX-R&RWA"HX7""V#(X>Y3L14R\* (YKTZSY&DR+99AAHJF5Z")J1-J OV-I<+7-)BIFP2NEU)8PQ)C3"U-G/ K:6I=-5;H B-&Z28SMM\$F26.H"5BE3O M;"J4I%6H8JBS459@~"?+^Y? -1YGC3IURT-2P7KE8SW-UF78F-K\*J Y M5W.RJ0)@WTFDZJX- C/<57?75UJH)08KSH!-VJ(WVTCGDG)9B2JLHJ MHHT-1-3M&JHX2 C#Y0U75J^QAH!-&ETV7QW> ACY=^2(TQ22Z'KX(O?P MO^N)S:8OJ5=^A9?I'S:-J-^#J JYZ^CHIT:BZM-&C1KKNG\*31NLX74\*DB MBF=-H0W/D0A2B(F\$")@AV~\$2-~Y/K=-+9F@NX432/^%Q#N- M9O^XBV:OXVYJ57\*+&>I7^U-V81J4+/QZD:XESM(ACFC^QDRL7%VMUW@U1 M? 0M8L)~%4S5%6-OI47J9)X& UO)V:T7B;8:F<-YD92U2B2\*~1(KA^BW-Y M;J UC.183)-&-O2XJHDJXJY2)1+B6BY%TF9R985%JH5-P7JLAV%J5J6/6V M- MG)\*\$0VZJ@ (UJM;J)R'D>=M0<6S(UW<~)FG;~9Y,XKN7C(NM)VKE5) MFV:-2;)Q9ZT5Z-J)N)C6)5GCYV1HMMJX90""(6!W=26+!\$67EYE-5#+?D; M^NARYZAC@J0-A7AAK55E8QBHFY)9G9JY;Q)~\$9MMLJ,NY(M)<~K2 M\$VOY5.HRS:72;~W<4S!>Y(XAHI9^WZ9"B(YU M(GVJ46RMEV<I'8W@W"JZZH@O#EK>3#J.W:2P.XI%JJO#J\$43Q\$UW)4W97L M|VE9|RI@? (Y82HL4<~2Z3\$SMN0HMT,BGCC+ P#RC\$QE)Q97H8SRE;5#0U M(?)EQ)9JA&NHQY^T'Z&VR-ES.53W<8-1J6W'S-C8R-Q1M,Q:DX;~=-1" MM8XC=\*8!#-1B8XKV;+~BX&L5LE\$LD\$F53>2L 8&P%6;9F>Q?B84K<~\$6Q#6 ME42LK8%(ITYI@N^P+~#8/2 M140:~TA?~HIVX- NS!DI=VN[2~7W(JDYCYL'3\$(/Z<5&JK)Q>3L+J+IDE(I9 M128+~I1Q55- 1J'6H.G4VJ132#K-6K48SAH"IAV"8).XV)BV"2# BR:)@!4 M6!-%.G>(I f8>=T.C8G(p8B&+~)YJH4G.W+L^WC MQT3G(ZI@<55KQ5-5 IF)U(J225;WQ^X MNH62 !U WE:~8DU(?) ZT+O;4AU8K63-8RPO^M#BS|VU#- 6\*UDW34GW2 M3^6WRCJ1JPA FH-D#1HT-(T|KY+? ZH P#P' F&U^;1QVF4K'33-G)5QNZ ME+%)=-PWF\*~KSF:E9QI(XQH-V0B'C\*8\$;G+L6+GY-C0(ZI5f)&+~6C.1R6%HUC)2TG2TIB? QCJKG9U:AS2IQS@NTC#IR M)62-5K6<~4V"FXZS(FEL052'J3JSL)ZJA>N"OJ~K7F.TY4(MW"2TJRG18E:80G39VLLNG-DX"2^MO-4 MK2T)Y>C!^5)QIP5KB&4E#)DA|BSB>QE%W4G^0R+J\*%55.4&~E3Z\$8T)Q MUDWLG&B-!A:B\$~J82.Q+~LK6+5%#>S7XKO<~69|AGJ8;%YV|W"6%H& f:~HUPDW"6L;11);~S^M^Q C)M4AB+Y^K^QW38DSCGJH(UZ\$9JL M#>~5^\$9>=(2+~1A~\$~;BU=-BSIF+~6IRV8NU#8 FF+U|H9Z2;GH! MV9JKD-&J^K>N;2^NA"DMHIFW+048NY^9ISR8(-GB~+VJ|S\$^9LKF)B&L4@JF MSFE(5=)BNK/\$-WO-U?QY\$UVI8BP^OEQE12&QQ(JY.T^A9&D8:\$C'- H@ (2# M\$73U""G2+2ERAVUN3DYIN1:3F5Y42=-9PS)9JK^W;V@N;~6N\$\*0J)Q^ M1BKWXXKLAD[5(-LN0K6)JTIAX&IQH^V4.D3+~%JB-FAB52@EKAZTKK-) +LXG MK^V0^ZZ^81QS+IU/&G^QZ<~.28FL1CMHB2 L&K&MM)UK.T" F^0TX(M\$57Z-MA G9VYN5.WB7:5HO^%04^02>~W^9\$H&9-&?&N6);RP=K8ERRB5HDK+09\*7 M^BHI(>8CHE'SS9&QF6\*,FTRL? !# WA1;2SYL M- 4K%I5-~FEV7X0J)U^T M2+~6;W#1-PEJ;HXZML&K-711#\$2PJBO(M EHM@LDIC5ONF5O-7"? UV92-K3 MB-X"RI0\$RF>~IR\$2PE5A13?OI;K|(%PWD<~2HST=-VIF).94%.W+~H3M\*&A M:-S.QLS&U\$LL2EF5P>@YEA2|BK23S)B|^6U2^L0\$SK5K-6ANV3~RVXY M&L031Y""Q|HNT=2)%AB;EJQ(2ZT)FZBI|<~.NND&Y#P#W@~36@-1 MU0(R.R?NN?4" \$JK\$^)=@S\*PD610:AC6M4SQB#J1.9JH5RX(=")69N^J MDJ;R1W)E43";2@#P#W@~35MPE^>H-HRC9%RDLE,2VYCKPP0\*6#@,\$1^U&VP/M1-FM^X9^Q5HQCEC7\*W88 MNJ5A#64E6^Y#M#U50%IZ+~N- CJNCIHUMFMRT:6.MN^J)QJ\$) O#^D- R)M> MIPL2K-!^A3J7YV36F\*:77PL1Y;~\*IS ~29\* /R;TQ/F^H#X0T7OORU(XF^M<~;1A2P1G>~%3YA-5T:IS#TAI (~.8>D/A#475GJNG5.8>D/A#1S#TAI(-&O) MLM9@K2JR9PAHVIRABNS5.M;8^M- M^Q5ZNPHO+8RT9%&f65Z9W5.XM)45W6QIS#TAI (~XBHJTE^GW&Y#W?~0 M P#K(NGHIFB0IEW#%"6")LH(5-#Z" T:H^W^A.J.PJ)(?~JVI0K4^L48N^+~?2S%#(JQ M-H^I"&Y- <~!L-%F^H&9B8G@T# ~7@FQIE^@f#^+36^R7.M>GDR:N1&Q-M:2K+DK1>~\*\$STLE;&US#0@DDEFCK"Q8FEKHU3F^H#X0TD/A#1S#TAI(-&JZH/A-E#1S#TAI(HA MZ00IWHL&E#U-ACY=^2(TQ22Z^L+Z~WGJNEWY(C3#N8>D/A#4J M^IR P^CYM-5~&~IU? @O/G7U7JIG-2^PAHYAZ0\$~1-6FJZH((9+2B42T5Z365~#%(1) MN3M%E5B12%?(7HC%-1JSGS;\$=6A\$S5N% WJKILH""+JQ;J%>7(Y^0+~3SR) (0Q\*ADYR8DI^@)8J MCON M0^Q>X^G7259L&CINF: T6S9SO3F@~00J1^@/I.~10#W1Y^V>~Z~"~PT<~P|C?&CF^H#XOU~\*JHH50%50%55""V"0^H^I +~VZ#HHT^HU7JIG/2 M^PAHYAZ0\$~9T:KHU3F^H#X0TD/A#1S#TAI(~&JZA7Q M\$-K\*MQ7WOU?Z9B=33YAZ0\$~0LXB0J|E6XKE|C|7^F8G4BHJ|5O2\$~SBZA9+ M^7 "E:~8DU(?) ZT+O;4AU8K63-8RPN(IB%?>~7 M0 SSBM9,YAZ0 M^\$-22~)Y;?~\$~W""^C^0-5T:IS#TAI(~.8>D/A#2-Z^W>F(MINT M^HROJY991-KZG-E\$SRND2H@BFI^H#X-4JKZ^VA~JFRV&BRWBYDE>J MS;3( RKNCEM^93TIFV(Y^E<~\$BDS.7PE/SD.52(Q+~#))YV<~J=U>6M M^4D^O+~\$Y#U|T95B\$~"1&75<~&-0-95^&A3Z+NSRMQ2<0E63V1RK3>2?1 MN7|BQC138PN2.C^VQ6QWJ^@VY\$~BZ~G3"(I<~\$8^C\$2B976.Z/!#1QU M- R3M N\$~B3L 9\$~"1&2YF\$USVIR&91DR2K\* R4U;)2(O8JIGB)9N>2 M?>2-ODE3Q54\*~.JKZ2^VJNCV0I(P P1NMZ X-XTC@%KN067>M9LUDV"E M%41K9.R(C.J)5%\$&W9JG^H&LV IQPS>G FW%DIHV5I3FRLCJL/8-T-J^"MT1^C?N)YQY-G:UC<920J=-P \$2.1CW+~FKJ\$K76J <<~&0@9E851NQ, /&O(8H M0^03KT@U(^N%GD^1JN^PI-9R4E-H089)3.H39;)YRLXT-WCE1THLH/QBFYPO^AG O# M^&Z^G<~+P VZ<3@~C\$8LMLC4(92)&4O^F-(8X\$@VME)C02Q^+M51 M31-I(HH)~47HX7X^F2))DPC8B .PC&#<~^AU-?~^W1f02\$>? ~^W ~-8 MJYU6^J@55D2T2KD&C\$S2TN#JH(KKFC@6Z+)>6:E:QQ4R^J;~Y4~4##P\$C?~%U7F^H#X0UM>Q)B8JNU=)7F#2M?Z>~NP VZ\$[;;D MDI>YKOX^KC^XJFX-RAWN +S. G- V|EQ Z:0-50%""~U7JIG-2 PAH MYAZ0\$~6>INJZ6N^I)QD/A#2V" LG%~ M^J9EQZK-G^VZIK-(FU\$78WCW>7/;~\*K X?W)T^&6#2JWAK\$-BF^LSR-6 M9V>23F7-F>~>%JLB|DSW:~A51^1F@H^08~B8@718-P^V5QRLCE|SC3C&f(fX MWP%5Y^YCG7J<)G&<~1QY1JHNI9;Q9%8J^L12H+R9-6MJ9EZQ<~);(CD MO9:R9MUPY9)Q""RI@(\*DYDEN;~<1;K<356Y^J.TD:M8LAH7RI0L^X4CRGDS MVT7(R5-T^I^AY>1JFL-F(2FZ5YEO99OLF38AQO/HG8>IM&FME#~WSf86-E M&5MOLO#|BH9VYDFV^XXPM@^A {U):~80&XLF&5UHS^EC5HRD^P);~3+2 M5?(2;-ITM65\$=8A9Y0"U-U.VSGJS &68J)P);?O.H&)QT4F+Q^AL9I2JL MYG(W8TJ)HLB|J(HZ@<H^<-ILHCYH0 92Q1(6K)6fV>TFM.L4-\$6Z ML-/Qf(1G\$G^0~PIU(R.WD^W0-5Z5;+5^QM^KUD4~%RL L-LFCA19=-IOMB M+~N:<~X^R%EC"7%>VBY4QIB=)XR7?~\*2\*%9:G14(N^6M4BM:9V7780R3&M MMUIMTH63(C&)\*.5B"11-K#O#^X6.-=J Y6 V^WZ"~H3&UZ"Y6 JLNUYAR|V3 ML4<~GD2DOJ"~&2=-J^U=%F A M9=-Z) (J)X^DC8Z0R-TVIVG& N46:3H#NX\$^+~J)4;\$~JD2RM^E<3DIM MXY6")S7D1^THA70D1QXU+~1J \$Z-J Z?TZ^O4XXZHL.L61&W>~^F0J6W M(X^F^H8LW175-U1R?>~28G8YD&EX>AD|EBT5+~Q3^0F~ZJW=ND;M?J)\* M41^IP^Z#^NHA.SAF4-L^V^3HVTZQ2=>B;JKUDW&4MF:@8/93^6U^YU?"= MBO4 6:~NJY7-Q-Y9E|TVK6% Y80L# 6R4DHJ|K6F4N1FLB|JQGE+=~8TJ M31@8W9QMGZCV-FW)K9 PIS#? %>P?ICJ3=-9H5+V^C@+~9SGN@9WG<~MH3^")~J8 M9RFWR-K4FP)=V^C-FF-U?JQ.OL=).JOMX\*~VM8VZQ\$8V)N-O:"+G.)55(%<3-W)0R2W6R3GU5=>~@NFMQ2^\*~52N.\$9 M8HBT4(H^FW|<fDC~;)2B;~N+MLUSM040+BF-X9N9W (MU^~QFECCM-N9XJK#>~M>+~ME^%UK9f9Y:WX5>9(P MZ YH+~\$N\$>~f521 S2 ~- (GNZEYZSW\$BY^OIRL8^Q)P+WN?D+J |U0>C1ZSW\$BY< M-IRL8^Q:Q;?=(@GYF)"P^T#J>~3N% O(E|F W)"%J|33U)U>8W+8J5 M^+G/>1-RWN%\$5UEC!&O#NG?Y" MBfJ? J=-N8M4~NJ@UEW%W9IB:FSQJ7C5^U5 T~T MSZ 7K'D M^R^7A>~2M^ZQ=2W1J3%6>XD7-TRL9-P#82\$ XA|OR-P^J MRU9&0H??B-KK77N-SIE#J3>9JU>6LEKPU6X2&3G+M9XBEU&\* (B)-+f) M:~Z%KD.W XJ|YF48Q|<~#N^9#1UQ7P|MTQ|f%BNYf(C.X25PE.X0VU4K^E7PY MNJWB8^JU? RQC7.UXL&~^CVJ-~E+S.9:CQXL<8WA)Y\$>~699%\$@f)B9W)0M M8DT@GP^C|A4<~^MX^NQ;=Q!PMV3J|L)6C(QB3&>T;+Y"QKOHHEFXN^O+>1 MM60KLX@)\*6P17;%>5G768J)Q^C2JJDQ|TNS4JQ\$UM.T.CQJ7C5^U5-P/MZ=?HAGUO;>1 P^SRJ|CW?A|6F>~L|Q(N-IEXO'D)@fL|PP|Y1Z1\$#Q M#D^TPYZIZSW\$B|O^F5C^O) P^P<~1S#P0GYEY<8J>D^>~WZ7GE3AO~ M1NUMMP-2H>~HM+I^3^/)<~L|>~OV=3W2H0FZW44V2K10CZ6D)8V^C-FF-U?~4 JVM ^B-MT>~2 D:OQ.OZO^G|OKUCR?6JMY"-@M? 8J|BQ|OP^K2J?6.XDGYV6+ XA87^XT>LUQ)8<~Y6+~JB ~X"PH^Z^N"B# M(PB>D=^\*ZL P^f6~T7|NO3-W44H|PYJ-J CWJ(f+~NYJ-N:P<~@fX.OQ M2MZO^G|G^OKUE<~Z-NM9(f- J>0JZ <~JVTAC.S2MWRJ?N2ET>"QIERK6\*8QO.G1Z\$YVK%J|U0J+P-6NT527.OY+P-+J.M;JW;J49^59Q(W4D^RJ^H J4O#Y#F7JW<~6?+HAN?+GR"(D^A|C^W&M^AY@ (AR^G|S^O^LWY5^X@N^Z;G^L>f|L6J|H@G|U+5L@U+~M4TICOPR^S9 M;WL=+~6F>~XRG|Q^L? 6JNEJF-2^JL%~X:15BCE@J|(RR+~IUL2^ZQ^YK5H M^65^5FC)A^6~@Z^Y^QT4E|ISBR+~IN(C=C4-2N.B)JC<~KJLJN-R>O M72C|6PWMT4U!+2 (ZD>~Df%V M|)(\*)O#M5-9DVDJM^Q~5E8^C^2DJ0Q2O^S)7FWK#R7#|9R7^M:7-5-P|QJ-K@K^EFRSF7B58^Q^C.F~S^S^V7R^XBJU;JM=9Q)%E\$ M-Z.Q-28(F^3B4D6>B-PJ0%CMNW+~S45^VIMJIR-N^W80<f9 LW%VH9(A^MM)MX:SR&)+~0;VC7)5XW:91^6O.7RT0f?.\$U73%&02;G>MTE5FH+J)\*&+~ MC^FSC?2FEG@39^VIZ-M-LW1W";07HJ-MV5ZO?DT%~>~O9^Q:1+OFBU3KJ MK7W(N^L"1T1%6^V2=@L3\*=GJPHQ^9NBH)OYJ+G;^QOQ(ZG9=XJE;~>96W"~S>4 M-T6S^AV7<\$ MQ.Y3^THLS;9I@YH>D@>~2DJ0Q2O^S)7FW.CR7#



f9R7a:7 %?jQ)-/J-J1\*4 MS;-=-ANMP5?C%)VY:CW#5>2CIB+5 TG/3\$7\$;0,1 \$B-+4\*:JY\*%6V;=JO\$  
MCK5ZVEOLT/-)N6;-;H+&M@M\$%&@Q-WDZL;Eflj13&fH06LR61SBZ2 M4V 5S-ZL-!QK-YEUDJH\$KB63?Q2X?;2 S2 ZO^X^F^G^NL(Q(N \^  
MZ9>+Q^Y^8.fL/>4>D?1^0^0Y^Z1>.>J>LJQ(Nf ^\*96;-./;\$7F/5RYfWGW=-E%YRVA%SE@WZTS%V5fRPH>\*;OEf#AY2f+/DJRMN8F6  
M3/E&SCfBM6.2>WEA+05fHVWXfHKMfVl(>+JD\*>KUJZRR&Wf^A;NBR);(2U-M MYQ3?)7W:fFEfWNJK^<2F f(;<?DMN2?XXG;JV6f?0JCD^\*G?  
HV@L7GJ4R(2-25955)>22DJ0Q2O^Sf7TWL^2X? M;2 S2 ->(F N;.&>)&PWE8P @2+^4@;-0(-PZY>LUQ)MRL7 Q  
M^POfjQjO13P1O@P&ZWfP6Z>K918^8C<3.JC<f92DOQ^ MT>@-0^DJGQ M2OZO^f.OLf<>2X?;2 S ZO^XfWX?5f< K<23fV^AfJfY M+.-f J fCW?  
Af6ESfL7fQ)MRL7 Q^POfjQfj9KB22^E8O B^A?fC3&9O27XQ M^VZ5ZfLH6?2RfYf1fT8TM2OZ-N ->+X?Qf9)B@<  
M (QDT\$FfBT(Y2^LFB)1f6<fH.2fG\*\*R^\*G%(PfE<0.4Q0f)K6f<<fLJ0Q2OZ MO^Gf/ZSH7&0L^PM9(@@f\$RGDfN^"?&XWZ #ZM+?f9KB2?E8O^XA8?XU&  
M -YG+7%>fQ2^5MSf/fCYA4^6f148K\$557)&=CO.->3RfL-R)KQJGF)Tf% MO^\$AZA^B9-ZE0P@f4^\*\*(Gf95N^\*)K ^\$S\$Z7K6G;\$74QU@/#\$-UJU8;R^\*  
M-PPGfHf@f@f1fUUU^OXV^%UQ8Rf\*5+-->D;SH2f^f\$K;6RLHB-J<+^6.8.BV4> MKN^C^%6;K+K^K)S\$^HfLNf>3CC.6;P5BD73%?  
%AV<9%JfFfJG^86Hf@fJ5.Q MY9(NS9-1KLfE<9Q3N^=N4UfVG5825LAZLfLY@L^Q<2HM?(B@fL^L2WfE;fQ  
MG#1Q20fO-2NUTRf92^Y9.P-;fC2G9\$1KfVfN8KR%;HfVf;fE%fXV8W^fK MU04^&=fJ)&WK;-KY0:OQ<-MS6&  
f8O/54AU6&Pf69&=f9fQ^J>GELD.U^fYB1LU> Y.A^B\$XQHf@f;fJ.0 M@.EJfVfVN2&SSN+fKfSMfTK \$3DMS^UB=f2f5fGU.G9.J.R?  
GZ6ED/fN6+A2^Kf>0f^\*;>f6N&=OU9W^%N#f.-<MRVf+G7.Q<ZHY N>-SSEQ6G?&;>=&%EC^fXB29+4f)E/R?^5.Y;F6f145 MG^D;#fPBAf8>?  
=RfWf/Nf-6=-8?^fSfDN>fP-55 MG.-+fTf6\$-3B^CRfH82.N.PR9OS(GD;58fE1&2Lf+QJBfA^fLEF^fZ^2Z) MCI8fLXT^\*4MOP^fW.17&Q7YfFXN046?  
O4^DR+^B^R M^Gf>fJ^9^FS5Gf^1&fB\$>22DJ0Q2O^Sf7TW.CR7#f9R?fFE -fJ.-^YfVfH6fPE7YfLE7fLL8UF;-fPffU2.U?Q4S M%f6DG&O4%#  
(O&E=-SQB^%6;Bf9fB1-3Q@<fQf1^OX2P^fFWfQ^X>f1 MOH25f9;^\*O193VNN+;#fC9fLB52.X6R 5SHfW<f19=ON^f82  
PMC."XAG\$87)A&UC.8SRNUR;(7BG6fGE^C(8^ZT?^OKL?XJ.^O)5O6f MQ&36Zf1fZfV ?=+f8;@f(MQ5;75f)AADM&f2.\* MK?C2^fL\$;fH8fL62.U-3fJ.T@>2?  
DJ0Q2O^Sf7TW.CR7#f9R2^>7 -f^TWfJS M9R\$M\$;fX8&fTf%WO P-\$QJLQU2-SO-V7BQf9&(fVP3M^K&X>fEJ9 MCI@fTPM8;6f^f-  
K+>Df9PQf(2f2<@D#fPAVfHf#9\$SK9X^+\*T^\* MC^6f4 R5DE^fL(Z)fJfTK^f(RRf|X^fW 9-SZOVD^ BUTZPfQfSfQ)O^A^X M5Q?2<<  
E.@A@K\$K><-fZDW>7)JL+4M -WfWU1^fWEEZ^U995fM)W\$E^A^228< MB8)##^RM&6R.GCH<UGU9^QZWL2-26NA^fT^f1N)BSW9fJ8J<7G.O3D-  
EK:7^8UWfHfF8fTfZ \$S^A;-24fQ@V\$G MVfOE@X7fJEGRf%VYfV^M+VQ^WREGK%f1.Y4fJK;CC&EA 6>^CQ3&4%2D 5f1fN  
MYfL^A(KASXRO)-BWfW>C6fQ<^N^fOZQ9GW.MA^RN.f6J3QO2.ZXQJ-D6J MK>04Q339;5.fV^HUS&SAQ-GCDGfY^K4K L-5f-  
SHfEP^V 5fMf1;6B^8(fE^fW-8ZfLIAZLfK)-fJf%>fLH2^5>(Z^CR;3fJf3fL9 M8=-Q25^9NVZfD2\$5^\*  
(WQZSW\$BY<fRL8>fE2P0f19^DUC&NVR+9NZUDRX M4fE^23f2Z+DZ-Q.(E9+Q9-7;NU/G>fJVLDG9 MV2<3A-LWCJS^P>fQfJfCf  
MTf)ONU.PA(Y6K+1Kf)7fVSPf9fY^A2^29;&MBST\$K;JDM7f)U^EQ0f1%G^M96^>KRD;ZZ>22DJ0Q2O^Sf7TW.L>2X?;2 S ZO^XfWX?5fI^88;XD@^  
M&K9Q P#\$f- W&CUTNf)N5B f6%N 2^Vf-fVfJfM P9fKB22^E8O B^A?fC6 M&  
<U-8X@5VBfXY^@L^G78-JD6f)9Z 5&U.9%@ELDQ1(Z^\*&f)MP5VD0 +L^\*#AM+7f)DXN7X&f<-K3)JZ^PTB65^0^\*/G<f\$;-=&CZR-  
^NH=NC?>A(LUR0^4(%VGNVfTV^2fGLYfG3fFW^fN7<D Zf3A8 6:4# Mf)F2Q\$FM;3Z2f M0f^N^Qf P.fEY<+ZS6@2ODR5^2DUIBFf+WWYf)J3? M J9A?  
PfG>^33A>f)2ZU^fVfOY^O.UZ.E K4f^fVfOY^O.T@>PfP2^C3fO MWfOZO ^T.C6=-Z&CHfT-^C7\$QORD^QC^f2D^f5G.8^\*(0.fQCG;f%4fY  
MB)C^f0-8B&CfIKEKB8Y26;8Y@^4A1.458O(WM1^Q^fVY@CR?) M>4%f G3f5 7>9.4.Q@CFf\$)fB3&P M?;@fFNH0 ELB8H^3J<7)DU#<^A\$  
M2M3fJfFFQVAY2\$^fL(f BWf UMRCNfZfJ67J5B45NWE \$B^C8f)U529fM P.0fKJ-5fWfTf59fZRELE2\$548f1fT8V53^fY^F\$4fQD6f12O-GW  
ME\$^#6^JEN 9+NO)fG6%&+55<02E^fJfHX(V1.D?)D^@`^\$5^f-WGTO^5?f)XfPfJW MfG^>8>@>=NN.KBfE^\*Q.OYRSHf7K>fEVS/ M^AR@DfN^fJY^f\$  
(fC;9 UYPC^14Hf)C7S.2fE;OF^#E9Bf1\$;92B5=fJ.ZfM0>78K@LB8fZfHf+U.H\$^fE0^H6\$@>fJ(5QW=WH8;GO^\*2  
8fZf6M7P2f>fVfV2^O+>9;@fO^fFKfL3 U9?>3 -fJf1Pf&2f19fLAfM+7KfU7S9^2K7fO>8fT2R^%ED)A5P-MXf2PNfJH-R;3fQf2+QfP4f6Z2T8fMP@AY  
M5VBfZ2D>G JR^G #2:fyD9^6=65AOT8\$^% -ZV2K(DH^fONKHfT9&#f)J M9&XWfTfHNWAZ \^WOX8^7?DB-6YfWfP= CW>fO^G2Z>KXfO?PQfN )\$;  
M8QfRfJfR PfCYM 1-#J 1>2.OJG(fZ^fNfO^<fP^#W 27D<fM-^C7RZ9fHfYfPfO@fJXM(f N#O^N#O)f T2KHUCfHfYfZ 4fHfRY^N^f1f73?  
2+&.\*Q)fVfV8M\$>GM7+M-LW3\$YfN@&55.4@& M<0^0O/f4.)2D QA-8fDLAE>D^fF T9DYA.0T^Z^9&KM>DQDEfHf4R^46%9;  
MY^fTf;f8B4R;N88B)NUC.E^KQ&3fGBTW)M^fLX=D(DSGC^0^G&B\$C&9f8 MG\$;H7>52ARBf%5P0A^fL)OWf)ff fC;8^-\$^=Y^ PfG& fL\$=7Z2B^Q  
MYf-3W9)JN0^9D^G^D-998BR 8fJ2fU^7=NfBK+PfJfBC(0fLPR^fL1-#fE MHZ2;M79^>fHfKHJCO4^KSAY.fZ>3L2^6Q3f5fFQf)W^49H2\$2;(Q^N  
M095C+E.fZ9Y^6^\*M;5BB.^\*92XfYN3fZ7f)4 NO3 ^%fC;fV0VR0fJYQ(8f0f72>7>4D^\*fPPYfAF  
M9GRKf(2KJfHf8^fFPXfHLfDfYUfDf1(AE^%fG.4A\$TR9\$QCTf(%0f08^QCT\$ M^E^B80 -8B26^\*D@W<f)%5-CB\$D4C=fJfN193?+OORf18SV6YfJfU-  
f.ZY^fJU.U.V.^? MHN^5-WL\$Y.KVfJfTfJ/G9XLHMSVU95^f)C74Q&(fH7D%-GM^%f)j)-%&)-)M.B222fH))E^B;29^\*1.-@fA^E^\*0@^4f0^f(G^8@f\$ f-  
T;V>Hf^N M^KZ^fW^%Y^5LA&fLIG>fLWG^DG26>fJZC^DA8;5W+2^K;(&SOT^XAS>DXC MfX@^Wf1 LUY==^f(2  
G^U^R7X.OfO^\*UfQ)J0V^P<08f0^0f;A^? M^JL5KfQ2^6fZ(fJfGf>f0fQf1 fEf@Z9fYX-P M=WN-WfHfU7fHfTfFAW^RfF^f<f'-[WHfT<@f]>CP^PfJZ-  
&C5.DH>f^f0>@M=)fST^PfJfG47f=(fN Y.fHU95fLR30fJfEVMQfN^1f)^(fM^fJfJfN0<^?f(3ASYfSY>CGH22f) <^?Xf;  
MP- OZCYMfQ)82%Q\$BK+f22fJE^f4E&59M2^%YQ;KG>VDf1.fY\$UPfJ CAZfH M<fE@fH0BEQM;fO^%fKDP\$;U.W-WfJ^X.O.GfJfDfW<=)fYAZ-  
SOMW^D=26^fM Pf1=2fZDfPfO^Q^AR\$1fN7<?<#E^+5^B0P7N^f(0fEWAZ^fE  
MWZA f^%&;@fYfES-AN\$R4Y<3 )&H5&V0NWJ@fKHB^2^;=E@B^fT^0Rf1^%Y@N6  
M0RC^C5^f1(\*@f\$Kf1^\*S.f^>%fQLLZfWUKOT MAXC6.QW0f5W^f1+O.WfH\$;TW^fW&XW^Z>GJ0.AWf.VPWUM^Z 4>8^GS^f1^2 UJf /+  
(Wf7G;f2 P^C f(Wf7G;0.X>X/ &GY^NC? MU?&CHfT.SfO^HfT-^C5C9.Nf#&6-  
fAYfESfUfHfMfN-ZD46K5R^fVM86DfOPfDU58R2^fBKS36.fCA5HN@8fO^%fUCf%&9R@%f  
M4f)XBGT.C2MUCR4fJENf1X\$9Y^VN7+D2K76^fJY@LJ2\$-C3fTV.0CTf)Q.8fK M\$&@C(2^fYZLfDf>+fS1^Mf#f)PZ-SZ4T4^D-XN>3>S8D^C^H&;<fW^\*2=  
MM^4U^fT>8f9fYf6fJ9\$&&f>#9W+^6CYf1459-DYASRE\$&W;9\$O;6^fM;UMZfH^&O5KNBfTV7.HGMA0fL8^4^f/fW^T2Q\$UYV4;UE2N8^K5MfJfL^fEf7;P  
MUB&8 f50^X.7^9f^fL8fXRS5MNWDHP9R;BfEX9^M^OE(Nf7C M^SfHfBK^Q)9fLZ;fJ@C4W5f2fDFPOf(63?fL\$6^6f-fK?CPN^fPAfW&6fHfQ#f1  
M8J95Qf@f(R7A;f)(DF73fV;6fJfZ^fH3C48fEHSfCF2=GA.U+1Cf)JfE@f)H\$&7& M^+f8(Xf2OfQ^\*0-PB@-fSf)< \$4.ZD6W9^8ZfUf7fCEZHfW(f@EV^CU^R.Y9-  
6 M^E^fT-f6Q\$YV^\*0R^\*L^fL^fUPC0fJfNfO(fYfJfMPJ@fE^A 0Z-8^f)M62^5fTHfNKfLB<+^\*(Gf9f5-fS-NfF&f)fA5ZfJfP.4^G^f4fEW^f  
M^URf)P ^CR7fBf5^R^\*(fCS V^?EXfR ^@f0YfJfNTfIC3(B^<?7)MQ\$@B9YfP<f\$Y5G;S^fF(fAA9ML^fL45K6W=-29D3C.Q<7&H^f)^.N0;@8f@23NfX  
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MK9W.49365f)f6<f1R35^QN&4C5;LLNNZf(HC7L?1-TN2f)B4D0^fJfDfJ^D+9? MP&^f2fEF&7MQ3YfW<+f1fL.YR8NF5VUA2  
R.VBfZfZC7>fK+>f13O62fY5PDNH.MA^YfDfJ02fBEO7f680RZ\$=JfL.ML.X6.Tf935HfQfCF-fE2B\$^WEfO7AfHfRL&D M^fW42f6<-5fBR%  
(BDC^4N.AfB.^9CE65ZEfJfH5fT5PfR^fW38O0Y.ML0fHYGfVfVW7O&KBABf5fPH5(5K^fTKf2.Xf)UW6\$^fVfRZfP^KXM^O1fDFG^f1 Mf)?  
ZfZ^X.N^fPYNfR)OCW?fC5 (6^Kf2;S7K3?^f2 X.O.R;6D^\*3A+R.LfV3fL.SW44 ^fEfYfA^35f)^<8fYB(fQ M\$PB(f\$^fYB(B@Q\$PfQYf\$1f2  
=\$^>7.G JR^G-^KZfHE<Pf(P-fSfRfVQ) MZG;2OfHfV^fUO>-fJ3C;f^2^0fE1^7^HfC\$^BfJfAN0.fUf8fDEF^f)f>KXf MO?PQfN^f\$;8O1^fUf1-WOX8^7?  
fB;fTfJfRfVfTfTG^?@ZO>?fOHT-^H MNK3f1KYf24C PCVf=3754Y^AY2ZR;fZ>OGfJGfE(X Y SZ^H M.M+HfORPQ)=HBX8UN^G(SKMNI^R  
fD6.fJfT4fZ<fO^1;3fJ.B\$CAfCJAB M\$C^C6ZQf6C)Y2A^f15.S(fJNY3fVf6.V (WCPJf858BNfQ4^T^&;Y M^\*1\$P-RJfJfNX^fV-B2  
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=Z 7Z^66Z.GfYfE^7<5MMY0fV.GE^fYfY\$^fHZf-68 M6fPYfY2RC^fHUYN <(fET^<R\$^@f5 ^f7D+ MZfYfYfH5f^f8 6^%>f>fR0f;fB;f^f)  
f66DG\$2^fWW<@>9K\$^\*Q^6f(@-B2P.3EWf);S2P^\*(SU^fDKWfQXfRfE;S8UfX4fD  
MBCf)5Q^26X^XOX6.fP;f1.PB5fQ^0E;f%R&HfHVfWBO2U0RE^345fL4GfRS& MfJ^A^L>LHf+XD^94?TYfX\$^fTZ^fNfG#<@3^BNfYQ7f9B3fRfRf^f5f\$^fR2^  
M0DZ-22DJCP8^O)G^f%HOJ&fU03^4fAA#fYA-U3-U9.\$X-^28488^f\$09 M0f1Df162EG^f\$^\$QfT^>fC3&fHfN8MDA2K^fKSRM3-SC&<59)N^GCS.fKGW\$7^fJ  
M\$JWRME.3O4K3EG^%+^f0Q)BEf+OCUQ65;2(2^MfZ^f#-8M-f1fTB^<fQ9RfL M9-fTU^fDQf1f@fY2V^fU&AQAf>WV.\$KKf(49f5fLRT^f%FD3Q  
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MP^22.fL8fKfJfL.fA1H5W^?&9R3^f^2&B3M-8^f(ZDfH3Q^BSV^fL)2-)=O&M^\$45fJG8;05f64f+8QU^f5M.fJZ2-VBD^3390;P6KfVULB^fJfVMDfLNX^f\$K+  
Mf/>UKVfO^QOG6fZfZf\$^f1.f78Mf)L^fN=5Bf1-08Mf7B7RB3^fO.P.W^Q^12^  
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Wf(fTfZ\$)^D2^f\$&fL-E^fY=OLfH^fYf6  
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MS^6U^fUBj>X3<fW=C&.2DW=CfGfJ55BXfYfL1<fK.TfU>;R\$=f6Y^\*f4N M^QSEfPG^fR8-6KfJfK>Mf)=fJ%-NE\$N6.58^f5NX6ND^fT&."QV.U5RAfW^fA^f  
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MYP<fB^fQ^019&PEL+^f2fJfCfWc=8^f)9&+023M^6HfLJf6#^fT2AYM9f9<f1 M\$U^LB=&P^%6;fNEf2-52N.fHP&fJ2



Q\O="QVRVNPJ4">WOG%\$S4BY%HSUG/XP MM,S674A=8QP(B)>J5JX9J?BTRSO(R1H>>QC\XCAKQA"TVBG2MACPG+I2K MWJK67K-4W%\*9L<+J4B\ARY\$HA\Q(MZ>=>JN#=-3,..."G) #7,60LTI,JE15 MCVV4NX\VT4UHT9,H2(N=1H,XR6&BVT,+1T)7WTC`GAES+L9VDS81(E<-MD9'&-\*2 DK)NFFK<?T1KPZ\$PB3)3379P[(\$V M\$S\$BE9) N4(I@D6/(Q9^9.QWZ2\*,D7Q[\*&\$]LL@v5\$-12J.K'">Q\$2NIV\*MR M\$,I=6V78EG88MD,CJG'GRU"UV"N2,->) M1,R)H'"-%,C2ZC"3FJ-6GB MK0)T9L/\*-JK\$SGC+%/9W14TW?G-ZMNTBM(R%\$0!\*>Y-? QO8W70%@JXG>EE24RW13ZNV, #8(65>P1BF,KDL(N=&PUS&D M\*U=-AAW)0D=-1,-1 F(84Y))>DE5NVK.0M(9F6.O%YBAPK%4C1V5&Y0S22 M%0K'? f=MM^)-,G.XQ1V:66L,KZ\$D1GQ\N1Y\$5\$W1)(VYOTIMEZ>@.ITJ.K.M"TVU\NGYLOJ\W F5,8YUH&57(9C:JD,=) +KD,;,&W51'Q2=F9W\$JG2.H MD=-0W( L\AT>ML2, )B\$B,"NURSLE3LYBV A3 1I, XAUD>4B&QXUBY=-B.M1\$04496Y-&K 46Q03UXP[\*KMPV244>GJ80H1-AZIU\NX=-4@JXW.W>=J6\$ MG:0Q2f,-K&DFV^AP=0P& <>A[QT/> &EKA'R<7+1#>N?UIDTRC2UP 9,+E+! MO7/ZTR:F5NZS\UD^7J#D WA 2?Y\$VO4X6/UFM`?)DK1-K3%-+KX6/UFM M`?)DK1-K3%-%(fM>)>OG&T87f\$8SWA4\*837@27^M1 P#9& GZ\7TLLF' MPS-S+Rf(C%147'Y83F) XVCXV- CV&87-OYA509L635\$AUG@MMVNBW03^U M52%31KJHFOHHOA^\*,Z%6D46RJAL W-)27 MK4%-T^6Z9SN%6%5R"UHP@TH1T^?T U(M2)03(VP)VYZ\$GNH M76Q,(<B\+WJ4Q1'P1")JX">@(#IPAK\H?M)&7VZUO=LQ P+L"O<9GE( MYW%1>@X,X&BFIQ'K+K&1-5\$D,68H6ZHM^6B,K'1+K+A\*!R39HLY1,5D|>CNTP\G9HTC^A51)|+V E0\N3W,= M^ 3;7UF+=4\$|'LC8;#76,766D7(E-(3#)%\$81)JR'M5C%,OT\*FC&+1%0f8Q)3 MLW:M542@JW3\$O93RYB)8W0G?JLJ81JN1YJ:KH@W\$YTF3M1-(MA>Q.BKG- I3J6BW3\*RIJ62:F(ID@;0D7V\DSIS 4Q(AT&\* (W+S MU;F0) W&HL376+.%EKO;L3R,7DDY2-U),\*Bf M+LNP+C<+WAW:22 UFUQJEDD@f@H#R2"C9ZG%5C\*L7f98B\*WD>OYJ3M0H1MF\*-%@P@HF<,>@=-\*W1\$3:3%N&+L-A5-OV29(-Y%1\$9(TVE:9T(V+(P&QWZ>=>J)'CS+O MML=M@>+5FK1;58;1)&8f1QWJVPYN1CRRQ;FCO><C, <#=#; \*T+=O;R5N)G MZ45N>/X#N"Z"(C\*G\$;MP15Y1&D MSF2, \*\$%L12<+&- &#LK2IE4A>@V^+LSR\$3(4I2)(EFOH1 41STR963@RCH= MQ2\$15Q%#N#0I2AWG%#7TT-1M66J#X#(P)JH\$ 167WD P-31CXICX1)JH M\$ 15E)V\A.33X/ EVV7QW> ACY=^2(TQ?2Z.KXIQ?PQ MN )\$;8OIZ|TR VFTU\$PWX.K WGSKZ-&C1J+JTF.X'JSGRY>[S:747G-)MSUSU.U.XIT'(-)1T? 3Z?3KHTEVWF M0&8VM?=-NHP P KIZJ47J>0(5JSI&#DD>B&>)>89Z.%\$K=PT9MB3\*N+Y5Q2 MT41ZS?#OU(SP;f)I9:99V\$U9"KV^\$ZS (2>8@H0YVK@S>=>441)-?>QK MILZ47^N2VYWG:Q9&X -G'NK% C6TFESS)M-;\$fEIVCY\*V" 8-(L5LSNT)Y+Y+Y%&3%-NZ"C9EKL2L R MOBf- U:BA(MYJ&5359IE4413O&1Y-3R1J>7-1fQ\$4PD@(\*K\*#50TD2f'(M0+1-7)(WB9NC(=GA<KCG9HY)N=8S+7,;>L8Q)5RME"UDU025FLY'9\$R2' M>6 M1/168J)##RI R32K, @2\$3TGIC+151-O M35Y E"FY145%GJ, D34<5BLVJ:J#GC(-NR148RZ-V:1DJ0UYTJZCIME, M(VI\*CHBR;LL@F)-, (UH@Q-KU-E(MRNGA\1(-DGC2,C(4JZ:A)YD< "Z M,1486CXF@FF\$!@-#,\$);7/- M58D3O?4X-12%D:C:(Q%\*%G5(J5KHFBH7KSC5:8-RT;9C- f(M;H'fTUIO\$O MT6&\$<+15? YO(%X1A)NX@A#G76N5D5fINU7JLM(O.101.951V);WGCR M)+&X+%/#LBJV1'f)\*W\$ f(L1732)B7%FS-\*MY?&F/914R-PW847GCF\A)R)\$>8S M<+@,YU>W9B1fFGSHGCH5E9Z3P2VHC6L1VVR;O(XRVJID3)SA?>ECV859E+1 M8NEV:1QX;#f+7(W1\$)6S7MT1%10BYfIM(CGG"HO3QZ\$59FT>1;YJNK%-8S MM.XLG\$+Y8W6963QWC2 P'JPDX )2 DUS+75%(HN?4QMPQ\A-E,LBQ3U55- M5+\*F3(81)>2TEJ>#P2?P12YH&KU=M7 -M M1VPZ68IS9QIC59Vf(82@"2,1)>159ZX3\*R,B)8UX"BJG?2E'H'IX"1P M"1\IR?TfW\W-VJ-&2O7W07LA;@J(M>1+.8FK,E"\*\*\*US9E@:#67<'ARG'UG)T2+SDVSO%+5EG4H1:DOQ#(H4 M f879U1,-fE=9Q"19>EK#Q,>S220)\*KIHU>10Q01K%&D,2#9(XU5\$4-15 M'WY3J2>NNP5:E:Cf5IP15J\*A8X8\$G->850!N>GO8)2223H#ZHA' MAA'(&NOKKA)4" "2YUV->D-0KXB?UE6XKfWZO)QJL7A?Q K\*MQ7WO MU2 Z9B=2\*GW6J@10 -J%DOP=>?Y6OF)2'PO'M#BSfYU# 6\*UDW6,L+ K0X ML^JM0 S5BM9 TU)TD EMH7D0?<(2YJY'UP4#F0P;XB+X>f7Y"1T3;0:3 M1,AO+1)S(NL4SC(-E A@GfVQNJZ6LSD5-%CG- LT+H:HY82D+Y(Z8O M7fJO2(\$+KJ2(OYZT3 HP38K9:3UTTF<=>JG\*K&%O)NPWY525E)(81%7:2 =MMQZ1^>"L5L4PBW.LHB(M%Z163\*FJN1>OF5-10GU8F\*4>L>9.12E-W\,Df\$X0Y^>^CJ4M:VJ7^8 MZ%9=5&5Y@66.F1R\*\*K>- GP,5\$Q\A.F@S;I+BFIT-Y;J8F2@=2QQ4YZM %XG+;LX MHMAVDC(>13ZX&5MG?81JQ(8.A+1)<=>HYKQfH\AR@#F98H M6.W,6Y7&W+JJ>:HNZ\*, 0? MU8TSA XDHfJ@JTR 6\*\*GNL1J MO2X6+2CJWUH9(NUTKU2 VYRR 968.W.3)NC>2#HK@73PZC<#9F 326S+F3Z)WD7MTAMQVJ8P7%+ (JF9<v72UYIN M#-H(-("fT?MC:H7TJOYC\*)E,E;&=-D4%>736?Q519BXEW@WW("1&7J^Y M94X95NZ,NJKM;5 -SIO6-DJ15V1LSD5%7B0 J@H;C,WQZ0@'802B3FOW3 P M7#HSXD XADUG82,2:82D46BZ-AS%,1&+8M-H^Y'C(X6TF,K(2?)2"L\* M,MK1VINM)N&0;A\$6\*N41-RTIAFV.S;G?O&RGIMK",ZY18Z<M6M(4AQ 6UYTF+\*N2\*(K))fE(0 M1/E" 6N5L>-(^M G4M+'1:UVCUR5LD), (B11R9%CLFSYZY6f;#G5,6F9\$ MA141Z2"IM,VY\$N'IP^/J-W\$0+)%T^=1f,PR>9f;(3D-VL0AV=\*K2=7HH(E M/U'3,NHAZFAYS8Q^fDUS^&L6XLBFfC?25&Q -fLQ\$S6+P%2@\*DP-F,F9\$Y MDF%1@f15 YQ\*HJ=-JQ#150 6:FS#D71Y'F,B\O(@M3-E&KJKA92("6?< ML& ,MLBfNW YLR+AAG51.G+ IRRDNfB9VWZN)fG9N2Q@\*GKYW0- fPAP M@^(\G1ZFR8f")AOCEU;G+9T\*33DVA7C9-MRLE.GZfYR\*)%7H1.9 M,6Y>@ONG3=<%?0U\$LN1O@,@- Q4,\$HJL59:IX>JG2O+M2\*FI KYV+ )TGTf M(91"EN& M@4;F\*4P-VU46B\*4)"1CFZC&fA,(-'PY>'+'NYfW^YKL@'1X M:AP^/%R6K",&^W2->A17EFFY%&VPWVVG#=-22"2,KP(C\*NQ6)I.N'TS;X MfMOM\$\*\*">@Yp8f(G?NVP1MEYf)43:G@S'6Wf&T.XH^X=W#P3BSR\*\$M/N4W MS)3fUW^R#9HP,NZ,J3EWRYSIHfY'E,1.J8'0f&C1H'8'W'N"16K6M55%5 M5'55'55'V'4#8 #T-;+>7#fDXN7X&J<-K3JIE&EKA'R<7+1#>N?UIDU+K M-UGWKU)N;5;D P1X?TG74 KU-C%GJ9K0\WR9\* /R:TQ32Z^C%J9K0\WR9\* /MR:TQ31>+>7OB:YQM&% 1&JX5f\$UW? fH60K95>+@FCGP\$TBX7)KZ^OQE MS9L0U4SY^K-,CV2,BfE"ZCDIU"K&9+5:JOG+PHF\*S1L8?=-MS2A@X#@#7fJ28Z#-%A:Z-,T8 MR3@C2124:2D,(\$=0DM(1KR+L4'12Z+@K@C5^0,WK=-F'WZ\$5X5V\$+2G,1 Mf%9OW+LY\$[Z\*KF9@1D;1V@S7369)R%Q\A4E>R'Vf,4EF),Q(B114.F^A ME@S\$Q2P%W'W=1LXf(f;f#8;)=^1H&IQ,49JHG;F/S#;EWY5V',HZJ MLW7>3K1,X0"WW%17-Y7/UO(15186Q4JK;Z)8-HQF(1 JXLP2JG&H%9C M\$4? 5U;BMHfARI2L'DYZXN9QJLGSY LLD9Q^ 2X7Z/RV5\*4L-[P67(UZS,M=\*2VH\$KRYE2R,Y&65K9WL5 3)5ZU7Hf"K55A)N2AHR6-f>2S,T(L&3)2Q,& MJ'D4;C0<74W%52A;C"AU+1%K;4K\*O4RB5\$J55@Y9?IM%0\$'T8QC%P\$ 8 M-BG5,4J;G\*O53,5T096&,HRC5VCV(\*8;+> BfH<655QEK01=L4Y1F)H2.01(EU%Y -Y<+>K 3JfL>+>KJ'Y%\*,MOY"(ARD\$1N1YfOXGTZQ%7&7>SBU+-%8Q2BZT+>S>-(IR JBB\*A& f)1 4HBB>0 M1VL1 BHJHJ&3YfRIH3KE-T9NV\*DH":3-R<5C1?U)\*HJ\*+\*U;(R#ADBIV M3&\*BSf4YO'SB)0Hf& (Y<3K#5)0H(2@'10Z2JBW;5>f'W(JJA5#@'4&MfCIW@ZfR9%X+FB@@'YfY%>D>1S'N'<0:Z9,87E15'WWW8CKW=- MfWGCWJfL&L'M,7HNSJ0%8JfLOOMUJ1fWfWfYfL@FY01;1<S0221U)H\$S,M\$B% (43'"<)C0QJ5 -'GJNCR%Y N2^A2^W4?FLG MX1JH R^(WYf 1KJZ =KR%Y N?^A3W1Y" W/? )>HfWLCX1HY' %>T HU MHX1JX2DU-B?K+(R? )>JWA8O?PU'Wf VR>CWPU<1'3%0Y'"@)(?>=" M^A fHD;8f) f>f>A4@MN'GH&EY ACY=2(TQ2Z,KXIQ?PQ MN )\$;8OIZ|TR VFTU\$PWX.K WGSKZ+G1J+JTFX'JSGRY>[S:747G-)MSUSU.U.XIT'(-)1T? 3Z?3KHTEVWF M0&8VM?=-NHP P KIZJ47J>0(5JSI&#DD>B&>)>89Z.%\$K=PT9MB3\*N+Y5Q2 MT41ZS?#OU(SP;f)I9:99V\$U9"KV^\$ZS (2>8@H0YVK@S>=>441)-?>QK MILZ47^N2VYWG:Q9&X -G'NK% C6TFESS)M-;\$fEIVCY\*V" 8-(L5LSNT)Y+Y+Y%&3%-NZ"C9EKL2L R MOBf- U:BA(MYJ&5359IE4413O&1Y-3R1J>7-1fQ\$4PD@(\*K\*#50TD2f'(M0+1-7)(WB9NC(=GA<KCG9HY)N=8S+7,;>L8Q)5RME"UDU025FLY'9\$R2' M>6 M1/168J)##RI R32K, @2\$3TGIC+151-O M35Y E"FY145%GJ, D34<5BLVJ:J#GC(-NR148RZ-V:1DJ0UYTJZCIME, M(VI\*CHBR;LL@F)-, (UH@Q-KU-E(MRNGA\1(-DGC2,C(4JZ:A)YD< "Z M,1486CXF@FF\$!@-#,\$);7/- M58D3O?4X-12%D:C:(Q%\*%G5(J5KHFBH7KSC5:8-RT;9C- f(M;H'fTUIO\$O MT6&\$<+15? YO(%X1A)NX@A#G76N5D5fINU7JLM(O.101.951V);WGCR M)+&X+%/#LBJV1'f)\*W\$ f(L1732)B7%FS-\*MY?&F/914R-PW847GCF\A)R)\$>8S M<+@,YU>W9B1fFGSHGCH5E9Z3P2VHC6L1VVR;O(XRVJID3)SA?>ECV859E+1 M8NEV:1QX;#f+7(W1\$)6S7MT1%10BYfIM(CGG"HO3QZ\$59FT>1;YJNK%-8S MM.XLG\$+Y8W6963QWC2 P'JPDX )2 DUS+75%(HN?4QMPQ\A-E,LBQ3U55- M5+\*F3(81)>2TEJ>#P2?P12YH&KU=M7 -M M1VPZ68IS9QIC59Vf(82@"2,1)>159ZX3\*R,B)8UX"BJG?2E'H'IX"1P M"1\IR?TfW\W-VJ-&2O7W07LA;@J(M>1+.8FK,E"\*\*\*US9E@:#67<'ARG'UG)T2+SDVSO%+5EG4H1:DOQ#(H4 M f879U1,-fE=9Q"19>EK#Q,>S220)\*KIHU>10Q01K%&D,2#9(XU5\$4-15 M'WY3J2>NNP5:E:Cf5IP15J\*A8X8\$G->850!N>GO8)2223H#ZHA' MAA'(&NOKKA)4" "2YUV->D-0KXB?UE6XKfWZO)QJL7A?Q K\*MQ7WO MU2 Z9B=2\*GW6J@10 -J%DOP=>?Y6OF)2'PO'M#BSfYU# 6\*UDW6,L+ K0X ML^JM0 S5BM9 TU)TD EMH7D0?<(2YJY'UP4#F0P;XB+X>f7Y"1T3;0:3 M1,AO+1)S(NL4SC(-E A@GfVQNJZ6LSD5-%CG- LT+H:HY82D+Y(Z8O M7fJO2(\$+KJ2(OYZT3 HP38K9:3UTTF<=>JG\*K&%O)NPWY525E)(81%7:2 =MMQZ1^>"L5L4PBW.LHB(M%Z163\*FJN1>OF5-10GU8F\*4>L>9.12E-W\,Df\$X0Y^>^CJ4M:VJ7^8 MZ%9=5&5Y@66.F1R\*\*K>- GP,5\$Q\A.F@S;I+BFIT-Y;J8F2@=2QQ4YZM %XG+;LX MHMAVDC(>13ZX&5MG?81JQ(8.A+1)<=>HYKQfH\AR@#F98H M6.W,6Y7&W+JJ>:HNZ\*, 0? MU8TSA XDHfJ@JTR 6\*\*GNL1J MO2X6+2CJWUH9(NUTKU2 VYRR 968.W.3)NC>2#HK@73PZC<#9F 326S+F3Z)WD7MTAMQVJ8P7%+ (JF9<v72UYIN M#-H(-("fT?MC:H7TJOYC\*)E,E;&=-D4%>736?Q519BXEW@WW("1&7J^Y M94X95NZ,NJKM;5 -SIO6-DJ15V1LSD5%7B0 J@H;C,WQZ0@'802B3FOW3 P M7#HSXD XADUG82,2:82D46BZ-AS%,1&+8M-H^Y'C(X6TF,K(2?)2"L\* M,MK1VINM)N&0;A\$6\*N41-RTIAFV.S;G?O&RGIMK",ZY18Z<M6M(4AQ 6UYTF+\*N2\*(K))fE(0 M1/E" 6N5L>-(^M G4M+'1:UVCUR5LD), (B11R9%CLFSYZY6f;#G5,6F9\$ MA141Z2"IM,VY\$N'IP^/J-W\$0+)%T^=1f,PR>9f;(3D-VL0AV=\*K2=7HH(E M/U'3,NHAZFAYS8Q^fDUS^&L6XLBFfC?25&Q -fLQ\$S6+P%2@\*DP-F,F9\$Y MDF%1@f15 YQ\*HJ=-JQ#150 6:FS#D71Y'F,B\O(@M3-E&KJKA92("6?< ML& ,MLBfNW YLR+AAG51.G+ IRRDNfB9VWZN)fG9N2Q@\*GKYW0- fPAP M@^(\G1ZFR8f")AOCEU;G+9T\*33DVA7C9-MRLE.GZfYR\*)%7H1.9 M,6Y>@ONG3=<%?0U\$LN1O@,@- Q4,\$HJL59:IX>JG2O+M2\*FI KYV+ )TGTf M(91"EN& M@4;F\*4P-VU46B\*4)"1CFZC&fA,(-'PY>'+'NYfW^YKL@'1X M:AP^/%R6K",&^W2->A17EFFY%&VPWVVG#=-22"2,KP(C\*NQ6)I.N'TS;X MfMOM\$\*\*">@Yp8f(G?NVP1MEYf)43:G@S'6Wf&T.XH^X=W#P3BSR\*\$M/N4W MS)3fUW^R#9HP,NZ,J3EWRYSIHfY'E,1.J8'0f&C1H'8'W'N"16K6M55%5 M5'55'55'V'4#8 #T-;+>7#fDXN7X&J<-K3JIE&EKA'R<7+1#>N?UIDU+K M-UGWKU)N;5;D P1X?TG74 KU-C%GJ9K0\WR9\* /R:TQ32Z^C%J9K0\WR9\* /MR:TQ31>+>7OB:YQM&% 1&JX5f\$UW? fH60K95>+@FCGP\$TBX7)KZ^OQE MS9L0U4SY^K-,CV2,BfE"ZCDIU"K&9+5:JOG+PHF\*S1L8?=-MS2A@X#@#7fJ28Z#-%A:Z-,T8 MR3@C2124:2D,(\$=0DM(1KR+L4'12Z+@K@C5^0,WK=-F'WZ\$5X5V\$+2G,1 Mf%9OW+LY\$[Z\*KF9@1D;1V@S7369)R%Q\A4E>R'Vf,4EF),Q(B114.F^A ME@S\$Q2P%W'W=1LXf(f;f#8;)=^1H&IQ,49JHG;F/S#;EWY5V',HZJ MLW7>3K1,X0"WW%17-Y7/UO(15186Q4JK;Z)8-HQF(1 JXLP2JG&H%9C M\$4? 5U;BMHfARI2L'DYZXN9QJLGSY LLD9Q^ 2X7Z/RV5\*4L-[P67(UZS,M=\*2VH\$KRYE2R,Y&65K9WL5 3)5ZU7Hf"K55A)N2AHR6-f>2S,T(L&3)2Q,& MJ'D4;C0<74W%52A;C"AU+1%K;4K\*O4RB5\$J55@Y9?IM%0\$'T8QC%P\$ 8 M-BG5,4J;G\*O53,5T096&,HRC5VCV(\*8;+> BfH<655QEK01=L4Y1F)H2.01(EU%Y -Y<+>K 3JfL>+>KJ'Y%\*,MOY"(ARD\$1N1YfOXGTZQ%7&7>SBU+-%8Q2BZT+>S>-(IR JBB\*A& f)1 4HBB>0 M1VL1 BHJHJ&3YfRIH3KE-T9NV\*DH":3-R<5C1?U)\*HJ\*+\*U;(R#ADBIV M3&\*BSf4YO'SB)0Hf& (Y<3K#5)0H(2@'10Z2JBW;5>f'W(JJA5#@'4&MfCIW@ZfR9%X+FB@@'YfY%>D>1S'N'<0:Z9,87E15'WWW8CKW=- MfWGCWJfL&L'M,7HNSJ0%8JfLOOMUJ1fWfWfYfL@FY01;1<S0221U)H\$S,M\$B% (43'"<)C0QJ5 -'GJNCR%Y N2^A2^W4?FLG MX1JH R^(WYf 1KJZ =KR%Y N?^A3W1Y" W/? )>HfWLCX1HY' %>T HU MHX1JX2DU-B?K+(R? )>JWA8O?PU'Wf VR>CWPU<1'3%0Y'"@)(?>=" M^A fHD;8f) f>f>A4@MN'GH&EY ACY=2(TQ2Z,KXIQ?PQ MN )\$;8OIZ|TR VFTU\$PWX.K WGSKZ+G1J+JTFX'JSGRY>[S:747G-)MSUSU.U.XIT'(-)1T? 3Z?3KHTEVWF M0&8VM?=-NHP P KIZJ47J>0(5JSI&#DD>B&>)>89Z.%\$K=PT9MB3\*N+Y5Q2 MT41ZS?#OU(SP;f)I9:99V\$U9"KV^\$ZS (2>8@H0YVK@S>=>441)-?>QK MILZ47^N2VYWG:Q9&X -G'NK% C6TFESS)M-;\$fEIVCY\*V" 8-(L5LSNT)Y+Y+Y%&3%-NZ"C9EKL2L R MOBf- U:BA(MYJ&5359IE4413O&1Y-3R1J>7-1fQ\$4PD@(\*K\*#50TD2f'(M0+1-7)(WB9NC(=GA<KCG9HY)N=8S+7,;>L8Q)5RME"UDU025FLY'9\$R2' M>6 M1/168J)##RI R32K, @2\$3TGIC+151-O M35Y E"FY145%GJ, D34<5BLVJ:J#GC(-NR148RZ-V:1DJ0UYTJZCIME, M(VI\*CHBR;LL@F)-, (UH@Q-KU-E(MRNGA\1(-DGC2,C(4JZ:A)YD< "Z M,1486CXF@FF\$!@-#,\$);7/- M58D3O?4X-12%D:C:(Q%\*%G5(J5KHFBH7KSC5:8-RT;9C- f(M;H'fTUIO\$O MT6&\$<+15? YO(%X1A)NX@A#G76N5D5fINU7JLM(O.101.951V);WGCR M)+&X+%/#LBJV1'f)\*W\$ f(L1732)B7%FS-\*MY?&F/914R-PW847GCF\A)R)\$>8S M<+@,YU>W9B1fFGSHGCH5E9Z3P2VHC6L1VVR;O(XRVJID3)SA?>ECV859E+1 M8NEV:1QX;#f+7(W1\$)6S7MT1%10BYfIM(CGG"HO3QZ\$59FT>1;YJNK%-8S MM.XLG\$+Y8W6963QWC2 P'JPDX )2 DUS+75%(HN?4QMPQ\A-E,LBQ3U55- M5+\*F3(81)>2TEJ>#P2?P12YH&KU=M7 -M M1VPZ68IS9QIC59Vf(82@"2,1)>159ZX3\*R,B)8UX"BJG?2E'H'IX"1P M"1\IR?TfW\W-VJ-&2O7W07LA;@J(M>1+.8FK,E"\*\*\*US9E@:#67<'ARG'UG)T2+SDVSO%+5EG4H1:DOQ#(H4 M f879U1,-fE=9Q"19>EK#Q,>S220)\*KIHU>10Q01K%&D,2#9(XU5\$4-15 M'WY3J2>NNP5:E:Cf5IP15J\*A8X8\$G->850!N>GO8)2223H#ZHA' MAA'(&NOKKA)4" "2YUV->D-0KXB?UE6XKfWZO)QJL7A?Q K\*MQ7WO MU2 Z9B=2\*GW6J@10 -J%DOP=>?Y6OF)2'PO'M#BSfYU# 6\*UDW6,L+ K0X ML^JM0 S5BM9 TU)TD EMH7D0?<(2YJY'UP4#F0P;XB+X>f7Y"1T3;0:3 M1,AO+1)S(NL4SC(-E A@GfVQNJZ6LSD5-%CG- LT+H:HY82D+Y(Z8O M7fJO2(\$+KJ2(OYZT3 HP38K9:3UTTF<=>JG\*K&%O)NPWY525E)(81%7:2 =MMQZ1^>"L5L4PBW.LHB(M%Z163\*FJN1>OF5-10GU8F\*4>L>9.12E-W\,Df\$X0Y^>^CJ4M:VJ7^8 MZ%9=5&5Y@66.F1R\*\*K>- GP,5\$Q\A.F@S;I+BFIT-Y;J8F2@=2QQ4YZM %XG+;LX MHMAVDC(>13ZX&5MG?81JQ(8.A+1)<=>HYKQfH\AR@#F98H M6.W,6Y7&W+JJ>:HNZ\*, 0? MU8TSA XDHfJ@JTR 6\*\*GNL1J MO2X6+2CJWUH9(NUTKU2 VYRR 968.W.3)NC>2#HK@73PZC<#9F 326S+F3Z)WD7MTAMQVJ8P7%+ (JF9<v72UYIN M#-H(-("fT?MC:H7TJOYC\*)E,E;&=-D4%>736?Q519BXEW@WW("1&7J^Y M94X95NZ,NJKM;5 -SIO6-DJ15V1LSD5%7B0 J@H;C,WQZ0@'802B3FOW3 P M7#HSXD XADUG82,2:82D46BZ-AS%,1&+8M-H^Y'C(X6TF,K(2?)2"L\* M,MK1VINM)N&0;A\$6\*N41-RTIAFV.S;G?O&RGIMK",ZY18Z<M6M(4AQ 6UYTF+\*N2\*(K))fE(0 M1/E" 6N5L>-(^M G4M+'1:UVCUR5LD), (B11R9%CLFSYZY6f;#G5,6F9\$ MA141Z2"IM,VY\$N'IP^/J-W\$0+)%T^=1f,PR>9f;(3D-VL0AV=\*K2=7HH(E M/U'3,NHAZFAYS8Q^fDUS^&L6XLBFfC?25&Q -fLQ\$S6+P%2@\*DP-F,F9\$Y MDF%1@f15 YQ\*HJ=-JQ#150 6:FS#D71Y'F,B\O(@M3-E&KJKA92("6?< ML& ,MLBfNW YLR+AAG51.G+ IRRDNfB9VWZN)fG9N2Q@\*GKYW0- fPAP M@^(\G1ZFR8f")AOCEU;G+9T\*33DVA7C9-MRLE.GZfYR\*)%7H1.9 M,6Y>@ONG3=<%?0U\$LN1O@,@- Q4,\$HJL59:IX>JG2O+M2\*FI KYV+ )TGTf M(91"EN& M@4;F\*4P-VU46B\*4)"1CFZC&fA,(-'PY>'+'NYfW^YKL@'1X M:AP^/%R6K",&^W2->A17EFFY%&VPWVVG#=-22"2,KP(C\*NQ6)I.N'TS;X MfMOM\$\*\*">@Yp8f(G?NVP1MEYf)43:G@S'6Wf&T.XH^X=W#P3BSR\*\$M/N4W MS)3fUW^R#9HP,NZ,J3EWRYSIHfY'E,1.J8'0f&C1H'8'W'N"16K6M55%5 M5'55'55'V'4#8 #T-;+>7#fDXN7X&J<-K3JIE&EKA'R<7+1#>N?UIDU+K M-UGWKU)N;5;D P1X?TG74 KU-C%GJ9K0\WR9\* /R:TQ32Z^C%J9K0\WR9\* /MR:TQ31>+>7OB:YQM&% 1&JX5f\$UW? fH60K95>+@FCGP\$TBX7)KZ^OQE MS9L0U4SY^K-,CV2,BfE"ZCDIU"K&9+5:JOG+PHF\*S1L8?=-MS2A@X#@#7fJ28Z#-%A:Z-,T8 MR3@C2124:2D,(\$=0DM(1KR+L4'12Z+@K@C5^0,WK=-F'WZ\$5X5V\$+2G,1 Mf%9OW+LY\$[Z\*KF9@1D;1V@S7369)R%Q\A4E>R'Vf,4EF),Q(B114.F^A ME@S\$Q2P%W'W=1LXf(f;f#8;)=^1H&IQ,49JHG;F/S#;EWY5V',HZJ MLW7>3K1,X0"WW%17-Y7/UO(15186Q4JK;Z)8-HQF(1 JXLP2JG&H%9C M\$4? 5U;BMHfARI2L'DYZXN9QJLGSY LLD9Q^ 2X7Z/RV5\*4L-[P67(UZS,M=\*2VH\$KRYE2R,Y&65K9WL5 3)5ZU7Hf"K55A)N2AHR6-f>2S,T(L&3)2Q,& MJ'D4;C0<74W%52A;C"AU+1%K;4K\*O4RB5\$J55@Y9?IM%0\$'T8QC%P\$ 8 M-BG5,4J;G\*O53,5T096&,HRC5VCV(\*8;+> BfH<655QEK01=L4Y1F)H2.01(EU%Y -Y<+>K 3JfL>+>KJ'Y%\*,MOY"(ARD\$1N1YfOXGTZQ%7&7>SBU+-%8Q2BZT+>S>-(IR JBB\*A& f)1 4HBB>0 M1VL1 BHJHJ&3YfRIH3KE-T9NV\*DH":3-R<5C1?U)\*HJ\*+\*U;(R#ADBIV M3&\*BSf4YO'SB)0Hf& (Y<3K#5)0H(2@'10Z2JBW;5>f'W(JJA5#@'4&MfCIW@ZfR9%X+FB@@'YfY%>D>1S'N'<0:Z9,87E15'WWW8CKW=- MfWGCWJfL&L'M,7HNSJ0%8JfLOOMUJ1fWfWfYfL@FY01;1<S0221U)H\$S,M\$B% (43'"<)C0QJ5 -'GJNCR%Y N2^A2^W4?FLG MX1JH R^(WYf 1KJZ =KR%Y N?^A3W1Y" W/? )>HfWLCX1HY' %>T HU MHX1JX2DU-B?K+(R? )>JWA8O?PU'Wf VR>CWPU<1'3%0Y'"@)(?>=" M^A fHD;8f) f>f>A4@MN'GH&EY ACY=2(TQ2Z,KXIQ?PQ MN )\$;8OIZ|TR VFTU\$PWX.K WGSKZ+G1J+JTFX'JSGRY>[S:747G-)MSUSU.U.XIT'(-)1T? 3Z?3KHTEVWF M0&8VM?=-NHP P KIZJ47J>0(5JSI&#DD>B&>)>89Z.%\$K=PT9MB3\*N+Y5Q2 MT41ZS?#OU(SP;f)I9:99V\$U9"KV^\$ZS (2>8@H0YVK@S>=>441)-?>QK MILZ47^N2VYWG:Q9&X -G'NK% C6TFESS)M-;\$fEIVCY\*V" 8-(L5LSNT)Y+Y+Y%&3%-NZ"C9EKL2L R MOBf- U:BA(MYJ&5359IE4413O&1Y-3R1J>7-1fQ\$4PD@(\*K\*#50TD2f'(M0+1-7)(WB9NC(=GA<KCG9HY)N=8S+7,;>L8Q)5RME"UDU025FLY'9\$R2' M>6 M1/168J)##RI R32K, @2\$3TGIC+151-O M35Y E"FY145%GJ, D34<5BLVJ:J#GC(-NR148RZ-V:1DJ0UYTJZCIME, M(VI\*CHBR;LL@F)-, (UH@Q-KU-E(MRNGA\1(-DGC2,C(4JZ:A)YD< "Z M,1486CXF@FF\$!@-#,\$);7/- M58D3O?4X-12%D:C:(Q%\*%G5(J5KHFBH7KSC5:8-RT;9C- f(M;H'fTUIO\$O MT6&\$<+15? YO(%X1A)NX@A#G76N5D5fINU7JLM(O.101.951V);WGCR M)+&X+%/#LBJV1'f)\*W\$ f(L1732)B7%FS-\*MY?&F/914R-PW847GCF\A)R)\$>8S M<+@,YU>W9B1fFGSHGCH5E9Z3P2VHC6L1VVR;O(XRVJID3)SA?>ECV859E+1 M8NEV:1QX;#f+7(W1\$)6S7MT1%10BYfIM(CGG"HO3QZ\$59FT>1;YJNK%-8S MM.XLG\$+Y8W6963QWC2 P'JPDX )2 DUS+75%(HN?4QMPQ\A-E,LBQ3U55- M5+\*F3(



D<64214-%6V#LE3M MM.>OY1\$TY6+;77Y4&[B0B2F04 B6&@UF\$NM#W9;G.M3K<[2J9?VH P90T<-.Q[4?X.WZ.EW>OPT;(8G>![.H]9M'L<-&^V)W  
M<2QZ?2F.1V-7VT Q< M/M/TFYXSDOX C/A/PTQ/ETZT0WZJ0>@WQ# HZ.MZ/L#HOMB-X1>CWXTT>OPT;  
[8G>![.H]9M'9U2?;3 %\$S^T^F^WN;GC.2 @V/MX^G/[#3\$NH/Q;XA T-0LXB0;]E>XKES 6 5!0\$A^!Q/O^ 6!/#1OMB-X^!  
M>CWYFUO>#LBJ6^!L^9,@1V;JRU6>U>GJR!>N^6W-AJDH^!SE^!-JRS^4BT4MY)ETK&4G,LE^;HHJ/7-(%ZK6%FN5L,6\$1^T^C<Z[F?2  
M#MN>F^QYI^B M9^QD#0NAIQ;9NVXW/MQIK6%Q^0XLY^UMJ^X%\_M JK\$>@JUDS#T&^A(2)2^Y8DV^;6 K55W\$9-MQXNW?OU P#R>C3-  
C(C(C(MR8H^M3RZ^Z(QRC8I^@-M 8\$WZ>3UIZ#?>^CHZ@^!JOB^!\$->Z.ZX-N7\$-HR E-M;B%YR6CZ-18(,52ZANUEAR5D^!GFD8^JYL;TP9-  
@M/K4R/HI^/7RZ^Z2MBGZ;0-8JTFEE/&^\$JL&3WJ^!<90\$[MYETZP6L4T\$5]JW^!T^2\$Y4G^\*Z^!>L4E%&L@NGLJMIOMOBY^!<9  
MR7&Q^T 8-#UIZ#2\$^CHZ@^!JOB^!TEXN)MAQ!>Q.N\$XEEV/BF/MB-^?Y M.+OBQ^;K&^!G^FE2WELU^0&M^8HJHJ57124F9A MLX>K-  
6^!56L>^H4FCLJOMIOBY^!&@WQ#^\*CJ#T&M^?(?601CN9V(Y\$S7O.PBGO^WBTFOV&J4SW^9^R7G2/H^856)>=\$6AHH(4 MX^1BW2\$)^0TCI6IQ^  
(PB\$7-QGR^U#^4K&FUK;J AHZQI^JN;WE>E^23F6 MHF^!N^X^AI3%>9CJ4>2XZ42\$P%JCN^!1CQF^KHV<^UN^!SIOBYXN4>L^K M^!2XN^2  
YGTIV\$<9R7^Q^T 8-?YUIZ#?>^CHZ@^!JOB^!1TGE7^\$S&W>H B^B^Y01O7FV;FO48K0;B-L^!&K5^;7^QRXUPS^D)GS77Z@-86J^?^D7DL56WK  
M2K&3L\$K\$0H^&8^D6S^QV-7VT P 7/1Z>^YB^;Y^!#8 MCZL^P/DZ@^!JOB^!T 0>@WQ# HZUI^K/N^X^M1JNVZ2^YB^6J\$>Z+N^2  
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%Y^!&5K^EXA 4ZJ8D^HIO;T!IRZ=\$32^CH^MS2 P5BH^N^3JT^6UD^;JL)T^AVL&JE++^2%^#9U?;3 %\$S^T^F^WN;GC.2  
M^@VY^X^G/[#3@^HIO;XA T-19^!R^W^!#N^N^YR P^WQ33^S^XZMS^RW;JLZH MM^Q^O(W^9^H^T^H^H>Z8^W^QUUJ^;^!6^FG^OA^;\$%FCH&SQ46(FE  
M5NL!%DSD+8^%01F\$>(!=5\$V (5V^VH13T^0^EDQS^WBS^8BG3FCW^SMW=VVVH5R:  
MXI^?%GH^GE^!ZVEE^!>L.01(>O7KQI^C5W^!&>29^ASBQPY^56^RP^99M:  
MXVG^S2;Q382^!>9\$O.6F(B3I21VTYHDN^B;D+^AN^KT^EQ^!^V1(E)A&S^4Y1N^!GS^!2KN^X3%@R;QIQ;ORI&Z!+J5F^KGS&N6+JG  
M&5BL56^H^H \$6LH8FK%Q2Z>XM^>DJBVE^N/J-DK)6^;J^B^I(MW<35CF^T&YL^5NC9)IZ^!CJM.213%-N^KZ-1-6>M>^U&O^!LK^!#1)FG  
M&^Z3G^O^H^Q^NPCY2HVI^S2EJ^DQ.F+Y;H\$G@F3;3#^!B&>69IX>JW^!J;7#B MJPC^!-AAF9 TM^H2BWW^I.TYDS2^E LUUQ^&YVL&V^!S^!>JHYA8X^R-  
M@J7>-R1^OJW^!W2C99O^?D2CWI^Q^&S(6Y^89Z%GGL89W^T)C&S^>#M&C1K M5^O^!W 3F^X^J JVY7>6WUHV^SFR^\*3^<^X\$RA?+ 6(O(1^!6)^PY^PA+3  
MU^M<^RGL9P^MWB^!Q O OE^TL:G52P66T1^!>WW^!>Y^!W\$9+SGGJUY^AL^\*MXTQ/1^!J)CEVD^QBZ53N>LUQ^X^#>NVU4QED&T5ZY59O-  
M^JQJ5WJUTMJS^%TUHM7100M^!>NUO^!>?(&F(B(&F(E(CIT?>W^&C2B.\$ L^\$M7L3I^9^\*YEG^!U.MV>Y3&)DWV6MS?  
#M7A8NE5JWV^%F9W(+659^%>5M P^H^N^RYTA^K>J^P\$!>0!^N M0(VH9^Q>=>S^>Z!^P6!>Z)2;6YQI^2SX>\*QNC^DHY^2KT^N\$;9R;9%>M-  
UNC^IHUK^IYX9&J^!>2[F^W^Y^8V9RFY^6)I^!>OBIAM[FLN2 G^W^YB+^\$ MYTFVXXYVRJ6.N3DQ2^8YSG<^MYRNM7^KYV^GR\$17WF^WA^;5Y%QB?<  
%O^YSJCC MK^Y^K^NGC^P AS&>[C^N^TN.MJ^KBE^X9NHXYKE/F^!>M^W^2)FA(QC^V66 MR7E^XON^!A6W#&4OEU2^ET^I,XU-  
T&R^HJ^!>CGJG^!N^GN1^8^Q^B^<BY^MZZQ^!>&L-9MND5DEQEVK&8J7G6K9Q^4C5)HXEDMONX^KIGG^;2M^8ERB^B MJ\$U)PU-MJ=O=12C7-  
6UM3(\$F0B)J^K^%>4%>C%>(ORIP^!5\$B8%(05#^!>Q(M0^43^4@^!>K^GUEYN^?NN^?N< 1S P^!G^PUST^&C1HT^&J^X^C^Y0U75^A M/QAH^&EP[^^YNF^!  
#67%5GM 8R58YXC&7&12LQ^98)ZJTFE1^Q^M^ 68V+^;TPH^S58^U%;P1^!\$+H9BRPUI^!HH^!LWN^H+^!PWP^K8)YI(SM  
MG^FNDU1^!>L60C3^\*U3FGI^G36^!KYC>985.6CEJ^J^TUK^\*6 @>9^VE@P^A3^? ML0QEP@M^K^!8JG>RW^CWF8@93^!G.D5E^SW^%L^?3D7^!LLXJ3@6T^?  
^!UL5 M4JEC6EWRDFJ^BTHUI^QK>CLIR5D^P;4LRJ7IU0JHF^?5754FO^Z8 ^57C3B28  
MR1DQ^6AK6!^SC^6MR^ MAU^74MR@DZJ^!>8VEDAD9VL^C^G^KW\$N^U&2!^!M-16WG&%WX3R^W9.QQ^\*26X^!>D2P^N&F^KF0P^!>(NPF80AKO>J+>  
MMW^!JR5^GBJVPD7I^P^!>P^!>J97^!P^\*CTGJLJML7G M^\*C8Q(EL8^&C6OG^B^A4^OHI^\*V;I8FM.3N8O^!>  
MQI^GR 8YV^!YC7FBU^E&F6)2O0Z4O&5R^>2J^!>ZJP^!MW 7@^!T^!\$9QVHIX^DMQFV^WM4NGC.CB?^F^\*9F@+^!D^F^#E+^!>E2^07!;\$5&W^!M)X-B^Y5;2  
^!F&Z^!>UV^!MF2)Z526(UZ^\*VCM^!>C&GM^!>Y>^?%9THV&JPKK M^N^!>L)^!%U.9\$6V P^32J7+6UI  
M5SE4O^8^KIC8.QD2^<+&^!%R^P^!UDC^MM)QI@+^!618^\*EJ47949JYJZKQ=2 MAG^4)^!>:(F&9Q5\$P^!>?G^U^!R7X.O^!K75\$FL<^!D-O60)T.PRKX?<  
Q8^AC9R^8&Y\$5 6JP(8Z^V M^H^L^G5RN(5N;GL5Y4H^D.FC4J^PRQ&JYVQE8J^TB2)8^VBI2^G&%274G0>^!N MLQ^C23^!#G^!M6^!2I^O^\*RP^!  
>SM9-N^!^!>TL^!4^!LECO^Z6W7F464##2^?HUDL5TM<9^!M^C2^5^!M^\*!>J;3A?X@+AJU^WBH7JYV@X>&^  
M&^WTF6;3@NS2^7DC.N^Z75)#!>^\*0>6@>L^!A\$3^!JMRUF^B8Z5^&M8Q D29QR DW>^!G.R^E1^6R M^!>W3QNK^!>(\*!^!U^!>^!\$NU7122;IV^K@S^!>("K^!  
(SIN^W39.R8<^XRI^MV)+3^!M8ZE^XYI\$U3L^B4W^6Z29%>J36^2J560K^V;CEIQ(KQUB#J^D^!>4YZICZ^!7BF;DUJ^D5)U3)5LQRW^L7X^X2X  
MPQ5S=C@5K^K^!8QK^2F?>SM86\$O^@J^N^J3^XJ2W7;PXY@J^3^X33&6Z#)E)DW M^!K^!RS^("6^R93^&N%>R1@>^!C6^L7^!T(K^X^VZ^!6^2OI>V^!J1E3"  
MU070Z@^!K\$N2^>8@R5176TUWMM6GP^7JQ^!>A^!>FV^G^!>72GZFO^M^H^T^F^T^!>ML)AU^3^QE03VW^!>E^AN^V6^!>ECNX0J-  
^!VNVK^!WJY5DV5KDD+K0>^!>VH8^E MX^!LDFK^!9K^!>NW7J^!R^!>L>UV7HT^!P^!4MLV\$^!>@JQO9L  
MDUYN^E^\*SOES78)AX>^!>V^!>Q^!>F0.7Y9KMAI^!>A^!>H^!>AR^!>KZ55JU9N3M^E MX^6EKDZ29R^!>U1>^!>TXA64^!>)S4GFISC<^!>3,0SV^!>SI-GBN^!>QL^!>3V;7E7&4  
M2>XQ^!>Q5^!>W^!>F6Y;8J^!>HEU^!>C^!>P5#>^!>J^!>QF^!>0<^!>4^!>QO^!>BM^!>3G^!>C2\$Z^!>P^!>MBOY^!>J62I^!>WXJ^!>D^!>13^!>N^!>J4^!>FL^!>@>2E.S6^!>2^!>@&^!>JF^!>1^!>2  
!>D^!>XMK^!>OH^!>^!>P^!>W^!>UV M^!>@>32UQ\$4#G^!>S^!>Y^!>T3^!>J\$^!>DDV^!>^!>13^!>W^!>TJ^!>H^!>86V8^!>P7N^!>P^!>C^!>U^!>?<57^!>HSE^!>F&^!>M^!>  
!>B^!>SEF(TA^!>^!>D4^!>D&8^!>K^!>B)M^!>V^!>MYV^!>R0^!>^!>^!>("Z96IE9L815K4R^!>WPS7^!>XIB>^!>%GIV&M<^!  
M9I^!>B^!>+@8)06%>J^!>TE^!>4A@>Z3>7MG6Q^!>B^!>^!>AEMS^!>4^!>VTNKRC^!>VH)V2+R7 M^!>V^!>H^K^!>N^!>A6AWM^!>J2N5G^!>BH^!>("LO9U^!>Z^!>IAM^!>2^!>QCH^!>^!>2X^!>VVS>5L^!>C^!>388  
MOEQOQEK&HLFZG^!>4^!>+>127^!>K^!>^!>C^!>W^!>G^!>D^!>DIZG3^!>F^!>Y^!>LFZRI^!>9^!>RME M^!>EYMGOS4L^!>FHDD6T^!>S^!>10 9^!>E^!>O7^!>ZTR^!>91R^!>T^!>Y^!>2  
E^!>H^!>J^!>DXN7X&^!>M<K3)J5G^!>K^!>O63Y<^!>J^!>S)O^!>A^!>D^!>R^!>M^!>I^!>PL^!>2K^!>^!>A^!>2)7Y^!>36F^!>Z7PL^!>2K^!>^!>M^!>A^!>2)7Y^!>36F^!>^!>WWY^!>J32-  
HPOX(QGO^!>APFC^!>HIE^!>BZL^!>C^!>J^!>C^!>F^!>W30&C1 MJNC4^!>Z^!>H^!>J^!>Z^!>M^!>X^!>62^!>M2X^!>(\*NWR^!>TM^!>Q^!>4\$40Y^!>X^!>Z^!>JF5>^!>U+7H^!>S^!>K6 A^!>S^!>@M^!>223IU(YFB6-  
^!>SD/L^!>H^!>8^!>KL54^!>^!>LV^!>HB5A^!>GVXJ^!>J2 MNJH08>7^!>Y^!>M^!>LY^!>P^!>W^!>@>P^!>ODLH^!>9SD3^!>L8H^!>S^!>TO>^!>S^!>7M2JH8A^!>H^!>NZCE^!>TB^!>P^!  
MYZG\$P^!>B^!>PE>MUJ^!>PULTP>CAY^!>OG^!>6^!>RAFEI^!>S^!>V^!>T^!>^!>2PE3D^!>S0HJ0^!>UQJW^!>H ME^!>JBI&Q\$S^!>V^!>EDX06^!>I^!>J^!>O4C^!>HIGB9^!>A^!>XFQ^!>M^!>V^!>IR^!>YB5^!>M\$3&5L+>  
M3U^!>E^!>H^!>N^!>FJ5N5JG7S>T^!>H^!>6^!>B^!>V^!>TKY^!>^!>C^!>IK M^!>9E^!>I^!>2CS&KRO&M>8I^!>19N<^!>J45U^!>^!>NV^!>^!>8I8M5^!>QY^!>P3D^!>)H^!>C^!>1<67NE8 M^!>LD>^!>^!>U-  
^!>H^!>923^!>C5TQ4^!>K^!>8^!>JLPJ3^!>GUM^!>I^!>7F^!>%^!>MKN^!>F^!>W^!>R^!>W^!>T6E2^!>ZN6J^!>HT^!>H^!>K^!>^!>N^!>J^!>LXZ^!>^!>W^!>H^!>A^!>M3N9+U&Q^!>IA^!>^!>^!>QXB^!>66M@9M^!>O^!>M-  
0Y5&#38JMAJL^!>TKU>0;1^!>@K\$S\$^!>^!>#2<4C4L.9MGR^!>3XK>Z7^!>L^!>^!>^!>O MB 99L^!>E^!>X^!>HK-8)U^!>W^!>L<^!>JM^!  
J6^!>^!>3(O73K<^!>N^!>G^!>FQV185)O^!>L^!>J^!>8RN^!>J7Y^!>RVH5Q^!>^!>J^!>C>^!>1AKS0RVYNG^!>97BLI2 M^!>Q^!>^!>T^!>ZTOBM(TO)^!>9^!>2  
NU5-N^!>)M&2QC36@FJ^!>J3Y>2Y-JPS74<^!>Z8I^!>78 M8+AA&U>>S^!>JRN^!>VA^!>9RL^!>L0.X^!>^!>S3C^!>YVW4XUWX^!>JYM@P^!>I^!>5^!>^!>EVFVU M^!>R^!>U&^!>  
^!>S^!>^!>1^!>4QWB>^!>15.K\$2I^!>F114GI@&PL3^!>D^!>9919VW^!>L^!>X^!>H^!>G^!>7B M^!>S^!>^!>8^!>D3G6^!>^!>QKJ^!>O^!>M4GC90R^!>Z2+YH-1NZ1ZR^!>O^!>PBAO^!>O7CR  
MB5I^!>P^!>1^!>F^!>903^!>X^!>M^!>B^!>^!>^!>4^!>CQ^!>N^!>^!>QZ4^!>8^!>XQ^!>P^!>N^!>U^!>96^!>^!>2BT6L@  
MJW7>^!>GGCP4B^!>F9MI&2E(4A7+Y^!>V-8^!>Q^!>TUJ^!>+^!>CJ^!>K^!>+^!>Y^!>W>QD93^!>L^!>MC5^!>^!>PJ3RXR^!>0R2RK+^!>9K^!>JRCIH^!>HM^!>  
^!>Q^!>Y18^!>Q^!>MV&K2LU1K^!>J^!>H^!>RE5 M^!>S^!>5M^!>O^!>L45F&H6ED8^!>S^!>R^!>C^!>T^!>8^!>MJTWHU02^!>#8?&JZH^!>A^!>E^!>H^!>HTN MGAZ^!>W^!>J^!>ORI&F^!>Z71P^!>J^!>=^!>  
^!>F&EWY(C3^!>J2KOWS+^!>^!>F^!>TU5X^!>Y5 P^!>M^!>2^!>HT-1-6FC1HT^!>^!>C^!>HT^!>^!>7CH^!>^!>N(F^!>??X^!>AW^!>J^!>P^!>H^!>^!>Q1<^!>W  
M8SHB2@SMKC^!>F^!>I3LX^!>J73DI5PHD0RAD\$6C8YN2W20P@1Z3L^!>H^!>0^!>TG66 M^!>? 15-  
%>ZJAR^!>HIE^!>HHH^!>W4^!>JGMW<8AM^!>3&7^!>M6^!>%K2^!>K7UED^!>W8I^!>FP3&RV^!>L^!>CLJ^!>B7 ML@S\$JL^!>7\$A^!>G^!>LL2^!>W^K^!>^!>INS^!>Z^!>RCTRE@B^!>N^!>I^!>Z^!>J^!>J5IU^!>NWJ  
M^!>LL+^!>^!>X^!>BY>P^!>I^!>0^!>NB<^!>N^!>I^!>7(0H^!>YTC^!>4Y2G^!>SY^!>#^!>1^!>S^!>YUK M^!>9M^!>2^!>VRP@6^!>JX0^!>^!>B^!>^!>VKYP+5.SQ4JW^!>Q^!>W^!>W^!>JBDZ^!>S^!>1ST^!>Z2^!>1E>  
MR7.D50^!>U^!>GY^!>VXM4^!>2<5^!>NZQLP^!>J^!>U^!>%^!>T93K^!>RCO^!>Q^!>ASBK^!>OD^!>N^!>J^!>MR6@<^!>T^!>H^!>9CH^!>8A1+K5#D08B7QO^!>IVVS^!>RRJ^!>5BX^!>C^!>2L1(RP63^!>T\$<^!>  
MH^!>4M^!>^!>^!>QY>0J2T^!>^!>1^!>W4%CN@>^!>9E^!>V^!>^!>EE^!>^!>MB^!>T^!>V5^!>^!>G3&H^!>U^!>V M^!>%KK^!>X^!>YB2^!>L^!>G^!>WB(E75(HNH^!>N32^!>=0^!>^!>KC4+M5^!>I^!>S^!>GJA^!>^!>I^!>JM  
MBOX^!>YS(NCT^!>HD8%>^!>J54(IBB)3D^!>S^!>8IB^!>RB^!>ZU>^!>A^!>C^!>^!>SDBC9^!>X^!>ZLF^!>MJQ^!>^!>L^!>AXW3>NKJH^!>O^!>Y^!>D^!>1^!>%<2@95P^!>D7^!>P^!>HIGY^!>F5A^!>H^!>E^!>Y8  
MYAF^!>HJB>XFD^!>99XV\$^!>A^!>JG^!>T38H^!>330%>M&C@RN8XH^!>#A^!>J^!>^!>1R^!>9^!>G^!>Q^!>W^!>UL1B^!>D^!>S^!>C^!>Q^!>LJM^!>H^!>Q^!>MH^!>H^!>PABLN9  
M80FTDC2-GR\$^!>CI^!>3^!>JTD79Q^!>K^!>R^!>E^!>Y^!>L6^!>L6)WZ12=MCZ^!>H^!>U&C0^!>WZ-M==U^!>T^!>A7Q^!>Y^!>K^!>M^!>Q^!>WOU^!>Z9B=34U^!>OB^!>65;BOO^!>J^!>P^!>Q^!>I^!>3^!>ZK>^!>^!>?G^!>U^!>  
MR7X.O^!>K75\$FL^!>HFC8^!>5PUBAQ^!>G^!>H^!>^!>8X^!>J^!>HOGK^!>VDF^!>85V&L^!>LG15W^!>^!>L^!>M^!>C^!>G^!>RU^!>^!>^!>S^!>=9\$Z^!>I^!>G^!>X+3C^!>CW^!>K^!>M^!>J5^!>J^!>SGF^!>ISL^!>E^!>PLF63SG  
M^!>I\$>=5)2>M>^!>^!>Y^!>GX0&@B^!>I^!>X^!>423^!>ROT^!>L^!>QFM^!>1^!>^!>PUBLM^!>A9^!>6KC^!>Y^!>05^!>M0K>^!>I^!>O^!>^!>4CYD50C164@F3I^!>^!>^!>  
V^!>^!>EBW1\$@^!>^!>LT@^!>F^!>7VHND41BA>^!>9Z MI5G^!>^!>G26V4VP^!>^!>W^!>H^!>^!>Z^!>H^!>EE^!>^!>BU9^!>3D9S^!>RALWWD>U016V^!>B1^!>%O M\$0^!>?I>^!>U^!>SZOF355^!>30;U6&D5>74^!>9^!>  
(IV2G^!>I0K^!>4^!>1N^!>J^!>^!>SEF^!>D^!>L^!>R M^!>P^!>MMOXQ^!>JEB^!>^!>Y MU6^!>^!>3K^!>I^!>P^!>MC9R^!>JDL^!>S^!>L^!>#2>^!>NS3GER3395N^!>^!>6^!>L^!>P28JDD2^!>2^!>H^!>T^!>  
MVIP^!>W(5^!>555^!>U^!>QZ4)9L.C\$PZ>BDXN^!>CXXD9^!>T242A8^K^!>L^!>5E\$J^!>H^!>MG2C6H^!>4S)F^!>W^!>Q^!>B^!>DAF7Z^!>SE&^!>SLEXNGMS^!>F^!>9^!>89JB)VRG^!>W5^!>^!>92D  
M0N^!>JRCB^!>K^!>F^!>K^!>T^!>J^!>P^!>^!>K5U^!>C^!>^!>^!>40^!>HEDLANS^!>VQTD MB^!>8^!>R^!>^!>^!>U6O>^!>J^!>Z^!>G8^!>N6^!>WYDYD^!>Z^!>6M^!>I0Z^!>F3HW^!>4G@EWAD^!>^!>2^!>J^!>M^!>^!>UW^!  
I5&^!>J5(4EZ>^!>^!>6^!>=4Z2P6BJ^!>6-5(MQ^!>O^!>9Q&UJ^!>C^!>@>Q^!>2^!>G M^!>Y^!>9E\$M&8^!>91^!>^!>5^!>CPZ1G+HX^!>9=50^!>7K@4Y3>^!>^!>W^!>WCS^!>TAJWP^!>DUSU^!>MU8-  
&C^!>H^!>T^!>^!>C^!>H^!>T^!>^!>C^!>H^!>T^!>^!>C^!>H^!>T^!>^!>7#J^!>DXN7X&^!>^!>K3)IE&EKA^!>R^!>7+^!>M^!>N^!>2^!>UIDU^!>K^!>UGWK^!>N^!>59D WA 2^!>Y\$V04X6^!>UFM^!>?)DK^!>JK3%>^!>KX6^!>UF  
MM^!>?)DK^!>JK3%>^!>H^!>M^!>^!>OG&T87^!>85\$W44^!>83^!>H^!>T^!>H^!>H^!>K^!>K2O^!>H^!>J^!>U8E^!>^!>5NYIB4^!>^!>A>RC6&8^!>6A1^!>P1^!>?)R\$D^!>YIM6#^!>^!>FX^!>^!>^!>376M^!>J^!>  
(A@204^!>R^!>6DQO^!>^!>N P^!>8U2V699AEZY^!>2EDA^!>S^!>J27^!>U193^!>J5S^!>J^!>#^!>M3J^!>H^!>LKA^!>J^!>DGS.6BW3^!>J^!>V3^!>5J^!>J^!>5BJAM9XW^!>X^!>EQ44Y\$J^!>REHAY^!>R^!>3B<^!>C^!>(M^!>^!>R^!>E^!>J^!>P^!>C^!>2^!>2CVP^!>Q^!>ORJ^!>^!>C^!>^!>CTE^!>^!>J^!>C7@J^!>EY\$FZKPY^!>89VSCWD^!>4C5MS54D@N M2^!>LZ\$)^!>^!>U^!>J^!>H^!>H^!>O^!>^!>6SMR^!>^!>8J2^!>2FL&J@2  
(+O^!>5PW^!>AD^!>A^!>W^!>JG M&^!>BV1^!>#^!>L^!>P^!>K^!>J^!>C3K^!>(WIV^!>4XRT^!>P<9HJ^!>A^!>S^!>ND(DZ56AE&^!>76W>@Y^!>4^!>^!>D M^!>2H&63^!>P^!>9^!>PLX&CDK^!>^!>^!>^!>^!>B3.TV\$3<^!>^!>U2TE^!>IY  
R9^!>^!>J^!>H^!>K^!>O^!>EDVW5K



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%#B57R6%*C#V9D&-K.HO0A5J6*E.L.J#O#1:G5YDCG$S2*(.E.M)A.KL26"/O)H*-VG/I.H:;36J-MKI#JN4W;K<+CGW+V;+F.M&W0$;20AJ#57*T(-
+GDNR+DJA+)->F-3C&T#NU#>@HN+;JN.8"BXRKQ(C#A#TB9D&BCR21>$.0L/QZNY74%W99$>U?Q)1RF8BSD*KE95I0YD2:4"AF*+
MK41"NP1%0T9A9Q?RF5>.V2"#N27#ZE5Y(OJSHQ>8@3MCG@>@($Z>8ZW'M<UEQ&K)C#R15(761B:5.1JFM)-@12%>+R066F=VJ7+<J5+3C)1PIDH
M#J1E8%140<2P1+>DKJ<3"85E61J)3BTL*J"K*6G6G@C@KQ.16" M#H#?2
061V55@VD6#CD-1" #N9:56#0$S+R#HRTCHN3F$3B#H?>+JZ->8D&B#H&H&154*"/0-JT-&C2M&C51VQA#H:KJ@^XP M4&C2Z>KX/Q?
PQ\N)-$8OI="#U=-WOX877DB-7U* N ?>Q18^357AO MP=7->SYUJ&C1HU%U:-&C76-/(K)NL[-N$6K5NF=5-RY5(@V033#F=19=4Q
M$DDRAW744.4A0(Q$>8)1P.4D1JDT)H1)H@&NSJ&->2FLSVWVS&CA M%OF15E*ZS6.S*YFS%8DU(0#8E2.L1H(Q555#%1;@4Y3J*%33$3G"1)N1H2=
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C#C6H6G$S2Z" E&+1^11F-ID5F8JDFNB2>>J.PLR*HF@C#*W"V9 M82CG10VZUB2$+RECF18Q#5C*R5^H4Q2(12*:@1)2OM2D>1H;1BIOU0W?S
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1W49JRZ;-E&2C56DE9+HLEY MU-OR&1(L(QAD7CQ1DU;=7RA9 *N=HEG0;1S=#ZS2.E369&%5KD+7V1
(M$R)=G$Q5D7)R$#D4EDP6<#Z3KJ*$5=8B(B.KH1^#P#77N"14Q01NDLOE M;->3O59-145CVKUC5D6:$L=F$E$""H@S(-
QRSH79H.9$FGHFL2*JY&Z>M^AAZIO#BKMLH4>EB23L:FXU7HUUW4.1J%2$31JW6?>5-IF)U.34*(G
M195N^)*K.3.3J14^JWOB#YQ-0LE^#K.O*UQ)J0%UH<6?>VH?YJQ6LFZMQEA?1)%"GWMJ1^L5K)NFI/NDG(MOE4B#1#1-(&C51#G^0X5T:1HW
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M6K&=$#B108M0H"MAOZQ)&FQ1N5W>YM%2/3?>FQ(R;=Y2M4474E" M-MHSUO@#ADK86A51[-17;T>MT>:*4(K@43;8N1A>+1Z$>BLUX41O.-F
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MHF)YRGE62IDNR2D9.Z78U9897CYH.Z.R M+>D4G1#S(P)Z$2+M1LNW2(2K8>UHQ)5Q:(VY$>TZT&8&(4LK5CU M+L@2961@VP+""*"-2
J1.7.9FW7=-E6S9JBJX(R.MCYK+2&MM|E59(N&#/KHK7 M%J^A>P6RM.VB4>M"8E324&J.R.<@<K$M%R.H17X07VB3?27L6G(0VX.C
M1Y1H1J1N1T1U>NPMF)Y<->LW",MCNQ&D^T<-Y2=-#EUM8V7^AE.R34XE5#3 M)
(*3)FD:20@D&=6^VVVZQ116-KL-^9VCJ)3KKNS@>ESTF#JGQ5KWC.F.MD52%1L=-N8E10$K6P0Z2I9JNA^O^XZ>CHYZD8
M>E1@|YK>"W7L@&&5?)|TW<=-R0^<-OLGRX)5F3^A.2?Y$VO4MX6UFM^?)DK1)K3%+KX6UFM^?)DK1)K3%|(F|M>^)OG&T87$8SWA
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(F6T-B9C.AIQQD.FQBZ)A>+1.7BE0BOY+6.2)N.O.W1(THX1 M&L A@G5HBB0.IB$;3R2A&5D^F3YWB1);MV>=LNN1SUS(=A71&3&.20%
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M1%1%YC;@SR<01;V.SA$1Y.4LX4LD$=>1M3S&1(67FAD+D3J%<JLL""1@>91(S#8Y1K%+UF^R)8-MM
```



```

M(U6[3MKK-A8)V^B3UBIHB1XW(1-6QE7-ZJ53(8//@-JL4A=-9-QK M+57+V0H0F$3(3-3F6-Q^=-3-8F?-#Z 4-/0-*L3C8-,$FC5)
M)1223" F-7,TZ5EDG7CGK>(-N=F)&+1;-@JZ$OMW/637A(<0'LJ4:FUW;E MNJ,OXMJ?#%S##;TJ
MG7&+X-A4.B0N5.XXGM:"BXZ5JK1J1B4)EAI+7F<69"LDLFX2L-F@XR^LT MGA-JL@YOE*)-M6TZ8JCE))4>Z?92AS-ZOQ:AEIWE*"FL+7OODK&
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M;6BQ7JG7WY$UGYLU7HYYW^?X J0^#1V,Z1)/S5-1ZOIN=8Z)+-1%2V-MM%BOI&N/OR)K(S9H)+%8HTA)*,UV7XBN; M%4HJ<8PY$F)
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(MKM^R)NW-8+M144)FAKRVWQ/O4X+NV3*$ZF8%K)B5Q^5N8D) M^%0%<=HX36W+VO^&EDDLDF(S6N1L58^ON*ZWf;G8-C^F2-VWR9JC;
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[NMG5ASIN(M>M" B+>?3?)%8-2\$1@E3@E3#NOZA3O'D81ZNOF8IPU@5P08NQ1@/E%HL( MN2MG<73IMITVCLJ+M V"XMDTPTDBOS7+QOQY7+Q<5UY+96&/K!+586\*+PS9%9FIE"(9)9F5TDBDY("/ WAVY) MQTH42E0-"AXZ%CB&62IV1W\*/EQ(J E7JQDRNWKARL11-VLFD4C9@>04-D6M#5DS-G16XJJ-3GBCXKZW%+? @MRVTA:O%79YQ/4+-8D-U"QRR>S"C>0AFI M0\*^\*QRIAD:BO4.PW)5>WEJ#VWYYDZ7X@-VD MH%\*K2&D4XC&2.OK55^B6\*15-E9/X+6KW7XBUTNZ<2-DU MBV5J-8HRD/UR94JC&-A9>WV>A!+4%XYR+1LFO&834FHA-;LLLYJ3.5C^ M=-%M#4?J7)ME(/X&RQ<<5LB?1IJON-S7'G-"/(BO\$TJ+IO2)FP5J9>W8M@(?-TSK(-6QY5Uf,%&R3D(\$7S%F8Q+3CWFY+>7N#1)J0KZ4A&7CF(591 MWY4D2IBJ)DJ(1)X&RIM+10U+7ZAC(12CF6.0-,%?)%&S&R&IMR;J|DHLT5LRC>(3?W(P(HS4>1D\$>98(S9.816"P4(L2%70 X M:O)\*QM!&L5Vf(-Q\$\*F6S-FWI@.#&\$A6M#^3>J'ADF-B22BB<-L'[%.%#2H|@KIL6V(P-LL>9L\*XSA?>-Z)Y(-V<4K>?C'-IA&9!R<+1|1+AAFST! M:~>M|\$(T4H!+MJC92UEW\*8IOJ+1N792U"R-2G%5M8J)'QXMG658MB)7KUMCI/LASO";(YH"JE@>9C&XYB&(GOR@fT3!49S!&LZO>B62&-95H!"\$[3K M" T<-2QD'GJ'VX&H\$\* TO"1X8QQ'Q>ULX'/T&-Z\$8Q'X7IH0T' MGH-PK-&-D4YCU3fBL>P.LIGIMVN3<03&J#\*~7- <+8Z M:6:TXEET91SDT\*!T@VJ#1%|%-8-W%>BM\*~#1#(KPAYGDD2\*(S%\$&L)\$MI<-\$>Uf1-/H5&"E3LW,H(-)0N-9JTM-M=E\$Y136.XJ3RU:E)UHH\* <2[S93Q'G.#91.O\*>-G97\$Y9)-f2-4KJKQJC6+\$.9%7H1-6S"IA08@Kf1-M\*ZD'T'K M9FG20I\*JORI-&(Y65B6-YI&Y2(LD:AH2H)!:~\*ZGEU -E"/8R-8-W&-I+G MPX&P#5JFAE( >N-/LE5>/GU/@F5%& 7X^QN58-P>?1D0\$A&RB4K9&\$3.1-M+Q10'Q\$BH+ZAEBF1/f2 Y&PAM\$SLZIM>E!";ER8)K+M#\*Q1KE@H'7LU!)MV#;"S13NJ9+7CTL\*562\*G.G+~+%YV<8.DC&f2-NBHQ9-WB@T'OK39W832B571R(FB+/8)22#;4F" MF%91Q&3\$WRS8KIG&R^A%&HRBJ2X\$@IROCMI\$<C-&AYG2IZ60R#EOH"59 MN1DQIH-WK2Q:C-P% M9W@U"-J9\*KDW@QGM-2N-#W" T>K-HAWJY9HNP3=CQW,P( (VA8SSW,UZK3%),ML=3+&Q@G>S">+1T,UZ45C+&VZ5G2.M<~>2>JTM13HU<7L2C3(NWNUS"1L MR-U247ZV2.ECWX&BCTMJY&8&f(-J@QJ&E7EJGS>?>0STZQL\$B)M-MO-ZNKA3&LWBVf(0XY>57-.CGG&S2L9-4#\*LQM1\$MR3GLB/Lf,2-%V<2 M2U@L:IN&"NO\*VV^f@f\$@-#^X+M"IA>XNUf(N.%E-&)HEQ?YRV3NYS(N!~: M@N'HK\$J)J#Q\*6DJQ>64D2QO&E\*U>QO/E:HG)47EF#JTF:IDDJ:M1MA"- M>YQRR2Tf-OLZAG&A<L<4#6:QXIO&8HEAM-Z&R&IE9\*O<~E#Q4B-W(AI@&2-M0GCL72O26M'D+P@S4SQN:B7? E )L(A7~2E(f)ME@W/H8FRYB>Q)9-R,MT>W5&IRC>L3:3QS9(K'f3DB:\*H/HV M-J7M\*C'U@I==?1'MJ)MXXM \$B?Y M? VEYVW"Y4Q@G2:MOFS5%1.62-9WXJBGf>FPF6%VJ\$47T">02Y4"U)(L1-2 M&-R&W5C7\$@K0L@E>6"2(93!9:L6LJMB#JK4:Z6:BM(I\*M>G: "" E1BL4@ M:~>U7-2R%NU#-%(I3#-HM"L,#0QF-Q%\$C)9L&4fEJfJ2F\*~.@)(0BL90-MRQ4'9\*~<%A2%4.Y2V&f2E3G\*)~%8UVXJ(1^9&R)J4:DS1!\$Y4RC'PZNF MH%W\$NV%8%QULQXFfQJ>+~fW-AA&(J9MLA:A(JEY0CJ4Q.Mf&UI&@EA)YRA(;)CIHJM-EZP:JR4Y7#80HS;MQ)E\*G%PCR8>+1ZE M2L>fCGV?2"WOJ/3W4%A%J1-W5-SY8M&(P-QB1-P>U"W"GF+~)+~+YJ M@O7DDBW500Y0E64@9>5B'7E(QZ-VJU6Q?A41AA^G\*~>W)"&1VL(fW-M55OMZ"R0:~)Y1U1&PCM&3!+MMI2+R'J>W!"R8"@.\$QI62ARV)+D'-SUC+MB)65;BOO?J T\$SZRMM3#IVQf-2 M<#X-#X,-5L-8IXB? UEGXK(WZO:3-JJ MUXA-QIGMf/2&2PY68ZOY3O@fHUXESUfM.J1-724A+ K0XL^M0- S5BM M9- UC+~ ZT+~O:4AU8K63~:U)TD-EMHZL8N\$AU^@:~&CH&G<-<%J1 M)XWTVM6<20Z>?^2EU'OLU<~+R>94)O~\*~:#NYD'OY'>B'-K:94!M'WC? S3:U>-Q0E-GCC?EZ"B)%MH9Q'Q\$>6WYL#\$SYAR+T- AX?>ZM<~%J01Y M?IC>A10QERE3SB5'29HU'700>Q(Hf)->U2@~\$WASO)BR&.<~:~!^&-8AW MZCHLYZ>~NQI&KYVOf~MN.MO415-S\$C6+M0ZVXKS6LM8'3EF>37\$~Z3FU)M&\*KRT!\$[f\* Z8-JY4-FQD2NGCf9@8G2C~: E00E-NUR80:5;9V:PS4UKf M8R\*P-A\*R\*|J&9.U:M6BA&1%P|JHW;-D%-CJ(BF31\*377JR-/D4O68W-S M\$1\$#CR#NY^W\$/'(?'#Df-SY~(H"/+F'Z'9\* ME9E-NUF-9\$Q-2E3EF+~\*Y(G8GF3Q-2U)VEN6'AY<+~%9F>8M>~>W90:0Q3QP28 MM8KDDU#)J%&E+WW#R\$'f(OQ>0@<fANX>2 +O'5JL\*)KK(EB\*G7)RTRS MCF9")KL1(3DDH0H^VFPBVfIX0H"/(5.P>?>3@~+3%)L>R (>Z:QE.P316.MOfl@Y\*2SY%DF-HH\* (\*F4NTBR-2J@L1B@4J42R4\$K7K\*XE~%H7J/LXf<1K M&(JL6+1G8PQfTWCfLEf%Y1%W+~f106DI(B28IQY1\*)E\$Q'1"8D.8\$D ME%3\*N%\$\*S8N>8)~68Q-P" H:95.ZfGRGFD4C9>0)MY(D)LF2AK^X(X3%)MK-B(QUXBXL95-R+5LK%ICE~EES@U(YUIN4/%26\*Gf\*AG-XZ)>6.RVC54Ef MMMS?CR-W?&+N5=XQN+-M-RCMfP<9XWKIL47W+~%4&N62"DH"3Kf|###T-M'ZKVDUD MK'52~\*XA99\$}<9DK#B.<+D#SHDX)B"2Cf> UCVC&3V2\*ODRU9?7.KWV\$B.M%~%68Cf%PM-B+UHFED-V93'Lf1P2MR5.MD.#B #L4>(L86BD#J2?~F-TT2 AQ.&#QB>&O'5D.5D<3F<#>L54J5L@f4W.ML4)HK~NW9(UBJLLD5J(QK5F68O5LR68(>5)M+@+D7)O5("G.4C<S~HFF4E(QL?N<9Z@DD?U~ f5-&G1K?M:7HTMLGRXJ5f3>~)(U-D3:J3A8 M-6:T#fF2OSfM.4TNOA8-6:T#fF2OSfM.4T7OORUfXF^<1A?P1Cf>3Y MA- &C1HU%U9Z^~UO>#~+~+6C2@1DHGQEA>~ZA.DXSA9%JF7F)J~&MV18Y MNX-724CHH'8?T""K>07^HfP2-~!TA.%"9Bf;U1?~+ ~2)SD:2<3GF4.R4fH2W+RLV4GUfLJ)L2Qf)MJP?>7U7f@U~OGTW6\$~X\*YZGB7R~:IOO&#OUZ:ZGY6ETFQSDA6(N >2>C7-YHK&~J)E~JfKYV29#HJZLMZR0E49MWM@2\$CfY-B(B6NZ4083 M9R#60RW-AV0+~8&O'~MWE023") (SE&S5XJ59L+TFR)Q\*~&E)O5DIN?> MVC~:12/O<@&O.2\$1'2K@/E(^( CRTD#Af+<UfD\$S"ACY1R8<1-8@8U MM8F\$JOT4X&VHIS R\*Q\$>3JUN CYfTf>M6@K\$&(#AT@W(%\*OSS"J M\*80 R\$Q.9>8#W/(<67U5EJG4^J/SLM'2O4C3%>#4+8ED~:~P% DHT\$DK\$ MJ9R(U8\$DY1L B-? N@~:E"53;18GN&fDf MOZ- AKV3<~>8X("GF"-6fHNQ'41>WV4>~>99Y@L YGVCG-8GA @OBK+9Z\$IC<57X<52V+~S.\*\$&~6(fHML M43252ND4%>GEGE= (H@?>5TON3UfE8")5E0'ER+XCW@4G(JJ3\$J)(^J-EJ MVW'O'H)(H#Bf(0@(&#fHfHf(CWCX#KTGD@9~>85>0'83""R\*"5 MR#O'PTAZ01UX3APH3H~W(M"YF\*ZGS:O~#JX1\$5Q/NZ+D.OI+~"P MB~>HHW+MN@~UOJH3-X OKXLMJLUES\$%K.JA#UY7ZLQWf4-68f> MBZR7P&K=CE-B.MVR1\$4UL XRD\$\$(715H&K6M5<-fH#"HL0YQ:LC+9"@\*A0'N61\*KD(M:10>~>1R:1JY<~9? \*J%5 N3R"ASVY5"VYE"CEWIML-NF^OT""4 M.W@Cf+L=&806HY:(Z<f;~W4)NHf5U0?#82\*&JZH/A^E#5-KI M^ETf7QW> ACY~^2(TQ?2Z.KXfO2 PQN)J\$8OJ5~^92\$S:J^#J1~M~2.OK60X P"9.FZ?@0F4:12Q+ZV8FC"12%#~J12@W1#NYB@fFW>M4QPIfIB(^(NIVU\$EX-ZO?R'GX M^AH@~ NHX\$%#&X&XEU<2&#J M\*8)JGS2B'E\$7CQ>X/D~(fJHM&8MSfC9=QfH")&PAS#fD'-P'OY<M@f|W~X7:1@K^48MMV+<YfV3FDYQO? Q/L>8R(BQA=P-P3\$22MMN5-Q2AGM:AH&R5%&B+D8V9RQ")Q2'KOC(U6IL(RZU>6STK(ZX~f.M.,~1)8-BU^AW#YX1NIGN YAU)LO95R- 8ZMA2TQ.MBNW"1FFE~+76RV M9TQ0>~>8ZfM-/E>F8\*R\*~>26;9B -IM\*XC?T0COD>fTHS(F.&f#T>Jf># MS@~44@TG+RK\$"W":K\*RQH^?1C;\$S W: f#&61XR-M\$[4TY)Y\$036)-5X16Q MGVZ78AF~5YB8fMYGYO8HN.8<~9F:@A'6.GNZ(Sf~1=6%\$1%UZ~fT2T6 MZ@W8&T9.NHBPP^A'G;A%M5D= (B"B>DX5IRH3M8^>~&fE1E\*G:ONW4@%659HD+MBJ9%~JfK M%65 PTLPV:E0-W^INX\*~L35+XDC#LJf6f6WB-JEWPZ1-J MfOX.OYHL6>Q5\*~83U6PGBK>1D%W866T0LW?3GG1X>~V(N8)3Z3K\$@Y M-09V14f>~M18#>~WFUM+IC:(%&J<9CZ3BKPK<~#4? 1\*~F39T+~9R3LZJfJ1-M.8167>N>~+N7M6EU#UENG7C\_AJM^4Vf)G:EMQ@98YfO(ZXSH5~\*C8f2:(DX4= M:~%>MQ~&5BZ~>SFUISBV#W.XXILW)GGW&\*K)H8O>J5YJf-G75.LE7CJ MU>7-O/\*Rf&JTf)~\*R#~fY-6E#XCHWfLPUNW(GfE)f2>~)8ZXf>1E4%MR4 MO\*^@&O)(#3(51#662! <~\$R-BUBLBPPR'8fD+VVR\*2&7D)C#~H^T65 MRU2.FH5RV\*~)0JB(E51-4GH'R9B-XfO<~\$O<~D&MIGZ@QfMYH-2V6X3fMP%DS\$>= (HfL54Q).65U=PPZ-SCZYDD\*QCGH)+~Z+A)Yf+&L("29-EK\* M\*~XP)Tf1f5CT\*YMH6@S2KEfF-3)SYDK%EG)A (fP6K%>J:CLF&NAG:Q.TLSMf6A)8C~W3JfQV5RQP2LVDZHTJJD#E\*BDf-N4SRRfUDB M:2H(-D-VY8J\$~O'1K?2 T)CfU<~%ORQ1)LE5552j)%LL'B9=%J-fVZVJ.M-9%&J>~R\$1.V3=%O-MS'GS(f(QUS?P@R%)C+L'CBK1#&`XIXUf3F(9EZ-\$2fS1NGH##4^C96 MfD>3A+B.P+PRf'Q9X\$BCE2(J%>QGSfF'0Y164@Q~W0U~;HC2)Q.FX6VL M\*3CC&U+L\$\*fRIS-E\*?C>QTEfWEB4f+K1HHWf7- 2^T&CfTEfV\$S^fVb>J9fXfV0L^LX'GX9ONX4f!-(J6OQ'Q\$)M-S'GAf"6fJMR?Q@1%GCCYB<4>~>WDV^MfJLA>fE(BHfP^GCf#N&fE"?)F( M7-L3%RC1\$)JfP1K6%\*B\*~544Q:@O>3:1QH:M6\$2f M-(JM:E~P19PFDJHTM30T'DIEO\*~A5V#9NGCL?C6F9V:J#\*L:(H5D M& f.0KGM\$9)1EF4KH650'R0\$>~QJ<~<Z>:Y2D9D56DCfXV+Df>B@<~@Y6: MSSV>~<9T2\$QW648fE8+~E"CG(624MfYfZ2N%IE)fT22QIBE M&Q48JRBVK1.#C(E1\$'f>~5E?>9+V(H>Z4%\$Q.C8#fH03=^~L4B<~MQ\$0'1f)+O'GJ\*?T1f"ZY.V890fHDB8^O'9fN\$M&~C=7f@2&F=H.59VK MQR:EVL+G9UUX>~8PB:BPfH:NO'0f(TYBRJfJ/Q&M&G"~fWMBHfT(H6D8Z5 M2-D\$U\$0B^A^HfEOKL79fSf2M.RN(98TGf(1fZQG8(fE M-HD9453RfT\$5%N\$JfJ)7QZK)S.26(90~3RJ#N0W>~>JQW.PfM8^MG MV1~UB02U>5S6>(Gf95N\*~AK-3.K<~>UKOYfTf>Af#0 P17E=UB3B)~ M65;BOO?J P1Q.NGYW^~S~U/D^A^BJX:NG~#T.WfT^4A~ K0XL^MfM0-S5BM9-UC+~ ZT+~O:4AU8K63~:f)TD-EMHZL8N\$AU^@:~&CH M&G= <~%J1XWfTW77~1f1GCCD~>84MfJfBfJ@3;f~INX>2(#D.OY~K5HJW~)f)QTB.O>\$f2E2\$#R\*~WY)P3@>90~RMIJ M22^AKU04JQ>#N-52 +F\*##KU4\_YOQOY>fTf(MKKW@4OX1L\$HfQV-Z: MOS>)7-R021Mf(2f+2BIH.%BCTA.D3S'\$XfO'GR\$>~8-4Cf7W@JfYf-MRf(PD2~)(GW"HH\$S+SfJ R#D^&#D/O>~SEfRfRfD8Df\$Hf(>X0\$1Y>~U MXKDfED9DD\$@#LQ'QA-MfMT#KN5ZfD:IS@~J0YU@~\*~fE1H^GHA)6Rf->O4 M'U^P>f3~>XfFMf/ K>TG'N~)W"XILV(XV~f>568(GRU&L4^2LXfTB-M2L5YfY+~LCK&XNGfW+HfY&"Q9LX2&4KTX@SPMPG72\*Z.TfYQC+3SfPM M>5>)RRf@8H2U=N5VFDW+24V9?#M@~@Q90?6@R3C M9f9QfXfXHBZ?2\$R@K)C&5~&LRRS\*4208-LJX1C74:N6.77"CBf+ <~9J7P2V1"88.IQ3~RfW43:8Jf-JE1BfV9 MfQ:2BJfAPSUA\$~>ZX>~>08RXG>fBlW2WfH~!N8 \$Uf7~M:1#f8Y M1-03(+C)HEZ2%DYM%AG3<~&BHCL6@&%9=Z~160RBH-T@4HFfVX&YE'fMfB00Y@4^>~5X^f8fB>fY5NW\$~CS.40\$8~(A@~\*+fO- (CWC\$SPEfPAUQW~U\*~&S0 MH)7DE:5f\$TQWEGfL2LKRY)@JfR.7P'HfL4+~\$L:YV%)8CA#T'~#36 MGB362O6B&Q=@VEFFD.S2V+K26+~\$S~(fE2 (UMU^f2JfFOVAF^K1 M~+~92-Vf(8Y ER&E(UASEfUf>~VR:U~fEfEJ\$ M'D( "fQ44<~HfWRYf)(~.8CS'OfINMMfY?1P8?>G\$S<~&3\$ M~>N~>W-1Z@~N?A P~%)Sf(2%N2UHTfRC2UP-9+~E~O'fZTR:E5NZ\$UD^7JfRfP L+O&B:7J<~+MZS6@?ODR5?DUIBFU+ZS6@?ODR5?2 DUIBFBJ60\$2WSC~+~&9fP2J.MHT-&HNK7PZfHfP2~fTf<~HfEXL&NfESQMRfS\$>~Hf6fF8#fE M~"@f10<~fKR'V92 Z@WO! 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[illegible]



[illegible]



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M^!&L^LLKJD^R^!R$^U4ZQDT9^Y^CL(^!4^NC$WR-MJ4>M^J000C!P^CG/&(^=2IC%^4D^2^AB&^&-T+9K@6^YOOKM^WOY>7!77H^V<  
M^A=3U!F^M^9^G7$MA^!$!H^S2!B^ABP^*2#-5B1!-7B^A^V71N^X8C!H0M^K^L!W^*QS-2^0P^W>N^WMT!W2!HF6^1!94/B^PTY9<  
M^VEU^C&CV5&XCI-6?9=2^XOKA^,^#)9M>L^8^K^0FTO^X^R7MQQG#^!^KW@^MIG<^/1(HN0B
```



[illegible]



"R=3BK(0.KE7=HVV\*7W+N.VUNT93L5.IB>6M(2D:<|QSC&M4W\$;ET6KJM5!>DfG5YB4?HTUXDN&Q=J1GXRWY93V7566@@.M7?V&Y9CLMOPZ C+>W9\*99%PW)XK42PGJm9?TfJ5/G7\$Z9S<@/6TTF MA5:HHK&4TC/<+T+EGRF "\$E@G\*=>\*(6&GV2R=\$V^O6+I# \*7/5-P3S-MSV.A@QMD6CU.ZQ^53R:ILZELRUS(TKC:8+\*3 "-).X6^6(1)GSS)Z7C(MMU:=-3F=-/\$2 MfY2B)P=-|OYV^A ZP3:W Wf8/1K1P<(QS%ZG^6R)BfEBY;<)#U-<1TK+\*? MMM?QBY)+3S(f"l/TO M^<2Q^GMBI+QNEZ^%5fTQ;f)UE@/UG36\$Dj>4&3) M\*#Z#2)R=-KB) P^RX>7NC \*6^\*4F26-U9-Q).<Y>=QLN9f.Xf/EFF=-P5M MO-NfJT-#Q.BN#fZN<&M-V\*85QB2MO&f.T\*#|OZZ^A ZP7:W Wf8/1K1f?U MTf?-%@NWO/|fLHUHX+SZ+8=ES8C.PU^\*6:F>4T<@7NMVQUB&#f).Q6 M<3P59Q/7Z\*:"@KSFZAY+Sf:FU@6@23A6%TNM&T9D:IM/(C"10+O^4=-,f)W Mf=-WG P18 Mf:..fZ+>ANAS ZDZ-W P1V^HT.T<#PF6C/PM 70Y f8 M Mf|fLHUHfOZZf?P7:WW- P#ZL^+f7K:XB/X@fQ0:.#AX3f1L\*O=-f MT6%I-QK-"WU:-WYY9H5ZQ6\*KQSE90B34fL5Z^E(M^9Rf"KBY\*07:1LJ5((&FD6(33R9V0Q%RHDE?fVOIEVP<<X^#CVC3: M+T@>C.D9.fAFNf)9f6SLZf(03%:SNGKB09VT )7%TR.XQ#JRR \_BHT^X%\$ MYf|MBZ.4C=^R5<\*WN>Y#^&^\*Q:f|G<fC5^f)(A96QVf>:>^f8P^%f1fH4E7 M^C9BX.fHf:~fKXZf4C@fHD5Bf8fBJf1f:Qf:8f>K>NU=-FWf4KVK95>>SU^M ^4Kf)U5AZfK=5-W^CVO+^%G2LKH^D.GfHf0X4=-AfHfPG^GfHf6fMf2 WJNXf2f.YD#ZfNf)\*5fFK>f/U7~:6^?+M6 M=-@905fL^EJAY-LDfZ(3?1fOYfWAB&SK9T=^fO<=E0)W=^fO^Q5fYNA:UMF M^fYNO8YQ#&6:<6XN5VVC9\*9R3LW5Zf05\*QfNfLUU@R.ZfN M.29+=SUXUGCfQf078fL5QB%fHGx^GM@-6S?7fE9NB6GWK2YfVfV225fFKK4f &5%:QfE3H^ M2<8FZ7=-UZ.)>#fHT.#@fT-&C@X&CfHfX#f1HfT.#@fT-&C@X&CfHfX.#M3.VfGWYf/DO63^MB^TfSfE>SfSfGR8K) 6Q%:??f?3S.WZAXA=>fHfY5 M5+=+QGKfHP N\$WfWYfN:2Z?+:&C M P15f?DZ?Y<&OBl :#fQKf(=^\*GfHf|f8fFPf8:Yf276<^@BfYf M0AW#KZ2H03OY+9)XfTfN\$7fQYNDEUR\$MLHDHf"(KK^L25@X>KR4BRf06K-fJfFK&-SK6G2Z%6fJRWf8\$>f8\$<2VfJZG8DPL\$MfNf"NR^&^61^S\$KEE2fY>f5+^f<2E\$:.9W^fJS=f^<f)@&@^D:QfQPS: ML569f5fOZKUfNBfJfNfBf<f1.fI>4:"f1AW=-@SfBY?O^\*W?f)9fJfDf5Wf) MO^\$BfX7?-HYfP4ADfAMfQfLGF3>JE^fYfHfWf9@>WRfVfV5&PvA^F^KfDfZf7?3>R M9A\$@90.8DfLJfV\$3:Q4^2f5Bf\$@HBOfA)OP5 M0#>YX&\*4f)XB(^CfKG+2 fNOHE=-fNfJf\$QfG^Kf)Qf)BXP^L7@f1 f%e|G M^UfHf@f^502#@<f>+NUfYfBf%fL@X.255DfW9%CE0f:\*(C\$%fHfFL5f5#=-4f MG^Y%f%f^4Y.f\$#f8LBl8^\*:.DZ2fHfMf)R&.80fO4fDX@^G\$1fD>f2E M fHPB8=6^KfQf6fZGCB:V2#35fXf-AGOZ0fV^X0)\$:LX7:4W-G\$+J MBR6-Z3D&A8fR-WRXfW MfD-Lf13>5:ZfXfY^YB^HV-DY=X MfL@&@f^fR52fHfB M2DfR\$=DZKfYf=f^8.CGf85PW&fEHUfF&60fYfM^N<+C8AD2f\$PK(f"178Yf1 MO^#fL.RZK+fM5BfJPD7@20fTN.ZfDfTLfW+f%V>T+f1fRfUDf-B8Sf0^T:(fFY0 M2fL-JO20fHf.YOZ )C/E:~fRfMZN.Q&#f8fP-L-9S.49P59fQ^0f9Z^M5 M0\$T8Sf12f8f1M9f)(<2Zf)YfTA@.4fX^O^?O^f)CfHRf #N#6A5Qf1EGf)#(-M0f7^P^VYf12:Wf%YfV:~fL^E+Q%6 M^%L3#8RfN4Y>K^JA2fX@fCfB7fS@GfCZ^%4^f7fBOx %XN^DfL<f#XB27 M8Z9SfCfTZ=0fDf^fQDK&^QAf7 <NP^B 2f)QUU )>7 <NP^B 2f)QT<f^CG M5^GVAORfKU0fHf:fGC@X:YV3?=>Z0fYf1fZ/N=-fZ: (W22:\* \*W^ANf&CfHfTUXDN(=\*J\$0ZfW>fP\$0fMOX=W MD^f95&A^EFfOY^2WU3fTUfJZ\$>@f)YfJLH>M^PfELfG LZUfR^%4.f0.8>8? \*Pf) S>7NTUfL7:U4@32f20fY<fSD9^<B> MTEfEK6=5GfTVHT:2=Df@Z^f)JN5ZfGf5UfBfHfXf+KE?f)Mf^Of1URO^E4 V MS?ZK)PT0P\$SfPHfAPf10\$8f)A^f1fO2fHfKOC^fA QfTfE:28@>f0H^ \*f?70fAMf M0B^#APfTTf6Mf8XfP.GN^QXfP^DfB2fEfW.D2fS0W^#3AB>3f5fU^OEXO^fURO M^E4 VS27HZY7 2fJf)9OKU<NM.4.82^(@fBY@fO^XfA^7P C6K^?4:~f1^f(3.M^#0B>5f^89CD5O Gf)A^fBJWMfU3fV7:~f)TH2OCQZX9fO9QO1URO^ ME4 VS27HfUG:~?U66X&f5&M^%U\$WMMMSfTfGB=64UB\$2S+PO6HfJL-BfN MS0L.DfLFZfFf55NQfLBD0Pf8? 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D6fN^f05fD%>9DFC9fRDY^fLDHf<3>Xf)F9> MB95f(fH^25fTDfZ~(U8K3fG^\*29223ADYf8fQf6f)2fYfVfCGB5f6322fNfYfT M6fBf)9>9+L%~:6fHM6>3~%ZMf)#(PA5R>=>149WfDfEfJ9N<4Df2~.ONHfM8fADTBQfGBfU^4SfQf#N^B7LTf(2&\$S^%Bf)Jf(f7?7Q^f#VfK45\$6SfH MW~HF53f2HR\$U9@f)~fJZGMVf15fH^S^@fC9f8f2@f^K0f1R^fA=f6fR M8f^f1>fD03MfMfYNSfHfB^f0^2^4fBYKf%9fMfK0A8%&f>f)~fT^f#2(6fL\$2AAAW^fJf1fM^DBWfW9.Z1>fEG=3DXZf)2XfRHfMf5fHPN3N&&<5PfUVE^Qf)~<1ZHfH^f)ULZfHfHfFf3(6^Q^f)f^fCfGf5f:1 MO\$^f@f#R<f#SU^fYfRWfHfSA^fOHKEf(fS4fUfYfRWfHfSA^fOHKEf(fSfQfMPf35QfJZKN^f#9^<GfQ2E^f)JWCf15WfWfFfJfMfBf)~%fNO^fYf3MfM^fYfV3<~G^%fUKfS^90fGT9Cf)~fG^f%fUKfS^90fGT9Cf)~fGfCf1++^W9QfCAQXfJfRf3WfBfX^fXNfX^f7NfAU^MfGLfAP^f3<^f^+@3NfPf1fHfQf)Q>+R?^f(Sf) fTfSOMER5f+fS@X^f\$QfHAQ M^>KN4fKXQ @^4>8QfEWSDfL4Wf\$0YfAP\$0X@fB^X^+O^fAUP^fL5><M^f+~5f)HfQf0fLG(fE6 M8f~^8fTf23Gf~/MYf fO^#9fYf@DfW5fJfBfAPf4P^O^M0fCfP^O^f)fM8fML^#2fJK&fJ5\$^f12E^fQfP W\$4>fPN30UfZ\$^fR&^f~AQfMYBfD<2f254fH4UEf)MCG@fAGS~fMPU&f72+JfJXXKfIM2HYA^0fJSfO^fXf1.2fQDf\$M9^SLfDJT^YE^f(^3A^%8f M9BfDLfD90fHf)~2f6MfC6HfSV>>0722RfGS)263^=0ZAGU>M2KNfH8f5P^Kf1fWH368Xf8Hf)Hf4V^f(fRD3S4fPf7+9 \*\*6fBf6^#52(HfB MfSHf)HfL3fZfE\$Hf9f9f0K9f)~\*08YHfHf)R5=4224Zf@fAOXQ^fFLO^fD5fMGf)~f~B@fJfV9fJfYfJAUf4QfC^D^fVMAfMBEGS^29S^S^MD3^fLY^Z4Bf)~C%~+f1QP<f(MfBf64274fF^N%\$3fRfK33LNW MfS^\*Z4Zf)V&^S^M^JW^25f18Qf3Y@f#fLS fDf(UN^f3f&3fHS#(fEfL^U>GfHf)MNA:2fJG(f~fJSW2K&fL^Y%86f)UGfXfF6fE^%4fMfV48Kf4f%<0f)~fV%1fACf^fB^G^C^ZfHfM^\*0AE^K3fDf(fD=-69fWfRfE58RfHf(f^f)~f~BfHf%Bf1OANfRf@f4BRK4Z^fUN M99fQ545A(f~)J3f8f(KD6fRKD4^f("8f&f)~f1^KfR0fC^fTFVf)Q538f8H2@f\$ M6fH^+2f\$D>MMB9fQKUR^CA^f0THW92f~f9fBRf)S^RTf4G:~%\$7f27fNM^fPF MZ2f6%USQZf56E3f)8>5 MAF8f1f2%DI65BC@2f03LfP3f9CfL69+~\$RCJf22%<\$YfHZLU^#@f5EfDBKXf1 Mf\$1fRBBW92K9N5(fHDO^f@EfQfJ3fC\$DfMUEYf+77fL^%3fES^fN^<3fJ@f99NfVfMADDO^CARfL4fFCf42BRZAGfDQfJf7>@fC^fHfWMZfHf)4GOLDDfNVQfKHfKfJUQH8fMA5f(fEZN^Pf1fTR5PQR^f7







OC& FZ41\*1J%UJA4[OTM;+>AJZKF=ZYCC,U\$S^AG67Q~RGB5VM5/64H\$ M7:(Q)HWCGR5U=5-TF+~\*SD[GD,D9L<5\$IN=4P0Z2BM^W[K<Q  
OC& FZ41\*1J%MP=ZW[XQOYNE/201Z12=3~%J+>G~G2?7Q93YH;J3~8CS2#A~UZXE2:350?MJKZK^~YD#Z2/N11V;@JUOWQC2  
S=>\*E>K2OG2F[C]DNTU8~M^U\$7+G~2M:G M^1U^48/S1DNT4~.P9O!LRX G^I^\*~2XHU@F~W75F\$#2D/<~J22Q>4IN\$D  
M1CB2L3A64G^I;J<9Z>7?Q91L<~^DM>>);\$VZ2&5%5%Q@;GCYKD/^@RPR<=\$X MA^7\$D7~%[UK;S^9O^GT9CJ^~U\$PHG2H;DL=4NJT^MK4(E?IM?  
BJS^E?T~IZ MJ+>@PS1 BRIV^I^S<Y<~@D0%EP1214~%~5E\$15H^U^W[K<OC& FZ41\*1J%OWH~MZFSNPY3NXX9Y89DK9PGR;CMOE>L22+J2XHW2I~W[FZX  
M^+>WIA^M^>~H1YOA^?Z]<2I~HK?MP>ZW[XQOYNE/201I<~NM M^>~;I3TKT>D7W4~P^4[OTM;+>JE>CVX<~;J8WAW2G17H](ONI~MBG=^EK?SOKCXLGIA^M^>~H1YOA^?Z]<2I~HK?  
&~>~TLMZ5Z4@JUOWQC2S=>\*E>CTB^ZG^\*~WZGM~^NBR/^FRW[XG^A^F^Y KUQ^DMTBM^W[K<OC& FZ41\*1J%MP>ZW[XQOYNE/201Z12=3~%  
J+>G~G2?7Q93YH;J3~8CS2#A~UZXE2:16~@JUOWQC2S=>\*E>CVX<~;J8WAW2G17H](ONI~MBG=^EK?SOKCXLGIA^M^>~H1YOA^?Z]<2I~HK?  
MP>ZW[XQOYNE/201I<~NM M^>~;I3TKT>D7W4~P^4[OTM;+>JE>CVX<~;J8WAW2G17H](ONI~BG=^EK?SOKCXLGIA^M^>~H1YOA^?Z]<2I~S;Y?2  
F8!3/9Y/ZV(K3>GMP>ZW[XQOYNE/2075Q[N^R~NCSF MCT^SI^G^1^OR6^A9\$DL^10J0DG^EY&^C^QOGQX7AK^YOT^76 M\$GHTI9L23PNJM^M^V)UD?  
KNW<~<~L~WR;DFOE6705^ITE^I^<~D(E^Z M2J^XDT52^8H@8H3~AGK%K%FPAJS&C%9VHD=U)5220%J2[S5V^11^24J~Q M2B2Y1=^NC?;W~+V9C4~  
<3QC1^F~97%6^X^M2I^>X^I^0A1? S;JY>~(WE>LH~M^J3DY1~2LTH>~>JSLG(K56%Q;U3E^4~5AH0^I^>OZ^>QOGLZ1J6J7^PW7T48  
~0%4L\$A6>R2M^B^G C1D9>~;1D^7AB0[IL^4LF1]^\*~L<~W8N1N7^T MG^Y>~B;9VOY^<RJR8U^XXJAK0T1^0>@O~N M5!9RRC&^?~(5BU^NFCWPU\$  
MN^%D2O%6!G)E#J6Q^I^J^RXQ;M^8!9LZO;J~7.7QW^2>2ZG1^XNNXM^J0J MMU7H\$SP4XHZ=^8@#>~PP(X.C%621^Y\$);2+~^/~(G7OUM^J3K>>~%  
M~OJC<~<~KAQ^<H^?QOM;~(HA^563\$TBRGD)M^6WQ<~(LX\$ZP^<XQ<J\$&<~(6L^L M^E6D@Q^\*94V~74&B&~((~9IG^<ONJ^<5J58\$2SV^\*<~0G(U9U?>  
2UX6\$N^J M5HY^T;JFYCG^39(4~7H\$~;8 M^I~2Z+~1TM50G9^%X(OH^J^M&+~4 U^I(L^V9&~9GIU@^I^?>CG~MC=+~!^5;  
MW9C(C;B&~\*FUK^J2ZSB879U^L\$U^4~L\$U^4~2M1T^V~>U^K&>~JSLG(K56%Q;U3E^4~5AH0^I^>OZ^>QOGLZ1J6J7^PW7T48  
MZ=^E~2W)9PEDY>EGD^T)GCC~\*1QV<~Q~2/Q6~(Q>~I~HZPB2&0K)^LYG~<O M~&8EBR~;JE/4ZU>~1AFR^M5SQ00L~  
9;M^%<~D1L<~^Y~0 M^/(%JRY^\*D\$74M89B6G7B;ERN^V;JH)\$;FR4W(9DF^ME0^ST805^EXQYB^T^J16134>~+U85;HHR8^H^OT^P;2V)^K@~\*^Q>S^A  
ML^<U60>(S>ONH6;TV9JQQI^~JQ^96~1MQQC&V6IK63XB^P;Z2Z1GR#<@WK M^L^K^+~9.6R<@CEZW5H~  
{ALLN^E^\*TD6(M9Q)Z~^Y^T7L@H905^AM2KB~M35^E~MW4LG^%<0?2~&U^AFC9O6(5D)^87C^WE^S<~X3~<3&7~&M.Q5DVWOQ9R\$TSBW  
M^>J@RHY^>~1HJ^DSL~1HAZ~8%Y^L^C1P0MHE^N7JTE0Y1V1XWQ^M9R&UL\$&~MW2SVPSA^M(FZ.U~  
I^XIN>9G%5^5&~AE7GA^K.0~IE+~\$0K.O2.V~R^I~!MPZ.S1L^N1Y5R53;1D^T1~DBT(E&G9^H)RD);(4D<~(Q.6WJMDT^RHQ^H~  
M)E6CYLF4DK^J971KBR6^R^%&I>~MJ^%>J2^I^J^J^7Y1^2%8K~\$EQ;J.N^H^LM6 MY4UW;~&S)&~D9JH^XZJV1F@J^K)(PD MJ^J)>~7B6^F7;N6F&  
(G8^V~\$3K^U>R~@A.SC)0;~%9VF/KUJHV7DBD~MV7LUS>22D~CJW7EC^O7^JLFRF%3H\$;RDJU^<#U~C~>~46BF6J^>@~85EW  
M0D6G^T^U^&+~6%B5KC>H^I^7A^MDI^%5Q;SMK~I>J50OWAWQWBQ^F^<@S1~L MVJ^%L^U^6 M^DJ.K4~3A^K;~\$5E~P#R20^L(C6J9&?K2~  
KH^Y^HE4J^E MRX6^%6L1~23J0~V^1V1B(T2.UY^Z(DE>~3GSEMI9H5P2^>#D@J^OJ^LTN M^46GPD)^50Q3K;J5D9^E23%7;  
MK67~D26#4^B2575^GB+~L<~#K+9~1.58;~5GN1^OE^1VUK(6;2G2~<NM~M94;3QOJ7.I3C6R~6U8RUP^M^N\$&\$6CF~7C~B1(BF8S MRT^I^N\$C9Z  
(R MYA^K6)W^%MRQY^%RL+^F^U02YF^U(N9E^5FNM M53^J.H~X(1\$ZB;G.Y^S^J^YK(2AX<~>MCGVT;7C;2C;~)9B2Q1.Y;POV^&3^ MSV^PX4DHV4QYV>  
<1>~HDGL X^~L\$S2;QIXPI^QNA&M^%GSAT9S) SL&HB+GC ME^7MHJ^~LR3~KHZ;F^HQ5;U2I(4KPIA^%&W3^K<~\$E>D+?2#2^K))>~R4 M~  
Q^TNRG9M2(558K1(176DD>~3F1^T2.S13^2\$K).8NS^~3/JVV^QJURA~MHR@6F16.IB1^#Q>0Y^I^G^MMJ9;S\$;~G67H52U)^Q  
M^E~SCJ^J5.H^%NW7^9.VZ5K^U@GJ^A\$5~Q951JV^K~\$E^Q214731J5A&P^>6 MCV^I^E^T^E^I^V2PP\$5\$;MU^#U~RHBW^E&  
(WYA^9^S6!G&8Y)^5BG<@65I^5<~M8Q8W^I263U7B^T+4Y)^~%5NRDE)IV+5G8\$;G\$@J18TR\$D2^X~Q^EZJ8~1N M^I^OP~5L~D.MMJKVDNV^U@E~  
%&I6&^JHZ+^G^D(L^J\$A)8ZR;1R+~@KUVK)\$\$.OCVX^M(GR MY^I^M<WUTN^I^L2M<4C9)LJ~6V6 M>Q^I^(\*K5~#R2?J^>~\*NP21~>58R!Q>~B9I^?>  
YM^>~&7GKEHW^6GQ5^I^>F1M.L^3~%KT^AAEF^TVVNBRR0^;4Y)^J2>~5.48BTP4+31NCM).64M^ZZ3;\$;4I M21~K^K~F\$D72^D5+~72  
RHY2LJQ^IJC(IF8M9;T08&XMO6~<9SV(7^E.MU(C(70 MZ9\$;F.B^ITC)3C^4~C9O87E69N)^DE^G^X^I^FH^BB2TBHLL~L  
M)JK1^B^L^A&B07^4B;@65H^GT^&3@6B)54C)@Q(ZRAV\$S\$98JF;L9YK^Z M^K~JN^%S9HU6>~1.5%;U^YKG>~F^JZ?K~N.QR^#~I^H^>O^>~MN.HH2  
MX21X8X)D:5C2DK^C>HS2H^J^R5Y8HM^A\$S026^>DO\$18@I^&~&V08Q\$+~9MA(M5G~<~N^Q&QUM6W~I>~  
DEH^I^9.Z4BIR>^Y>GWFX5Z^\*M257O~>E;M)S^>QY3^I^M2AK<J5>((I^?~>QB>#FZ;LE1^XG!&G~U6:6~M)^%COE^D;Q^J^I^?^K~WY^V~XO;2KU^JH  
M~8\$WB^I^JHBEX~>W^9OJ4YXSG^>9&PYC@~.R;A\$5~3QLE5M62682Z>UPV~M85CRS)&(<~7+2026^N^D)6XG24R^SSG)71^YXY>5^\*J>~  
Y+6G5F;4O1&F9(MK@10JK4JNGTFEE2IR^ONZS>@~1T:5^>0)R^LA8;7^56DFC^<^9^\*W82I6A^I^M:0D32SSA59P^#4A<~%YHCQ>I^J;J^E)^2D8  
MYTLQI^L^I^HACY^N(K@JL^>O6S6@A^V^JXF53>~\$>T>0B9FLA0G154ED6W^M4MUD^O6D%0^\*%D>~PN.WN52Z@<T^FES;9J\$K^>J6;  
(Q5ZPZGA1VZC)^>N^Q#0+~A^\$U^U2^3H^I^M^<~#ZR(4M15%5;BK5HU@I^S<\$~A5%UC>\$6)C4>2P^\*G.JR;3~HLLWFO<~^NLO>~MWQ^0~5~?>  
0Q\$@2Q~Y~O6Q>~&KB22>~>+2~+J9?2L01QQU^(-17.3^K<8U23~#R MT^G;Z7;D?>^F;78(NQ^0^J^C7+~JQBT~I^TK3DG>~I^O52~VZ83K\$EO~HV!  
M^BLON~63RA~TVQ~L9~J~X^291~.95DU^%X>63@>A7N^TKL6;P8Z12CY1L017^MOJ^SRJ^KKAM6Q^HEI^?N^H^+PU@3Q^EF2SM6U~70M(EK&VN5N8GM  
M\$J>NRX3~2WAGK1Q.MCK1O^R^R^I^H^>~\$^Q^>~PL^EWB^~R&6~M3N^FF)^\*~M16C%)I^I^>(DPF@VXM&A6+>~<~S9L43HD;(HM^4YCI^  
~I^J8MR)>L^Y^K^5Z.B MR9W^LR^X^2^O^Q)^>#2I~DM7M>~66\$H~>N^Q^M4G6[NI^U^B52WIL\$)J24J^B&~597DEDKQ^I^>33S&L4A5^0L+~%~5\$CNPI  
M5TK6^WE;SL4I^L8331K9%MS1L^6T&V9~8X7QZ~&~(HBJQ^E.A\$QCRQ(NZAP^MBJ^I^<KTM~80UNDUW24DH8Q9J^<~3)^I^F^O&J0~8L^0&Y^Y22^E2  
~\*F5^M^#8<~P~FEV5ZC~LYVL6HU(7^E(M.J\$~Y)B5Q5DGLU33^#1.KI^W^G~G1H1^MBJ4.F^>D#9\$VZ^M0OP5NP3/((AAEHW^6A~I^Y(K~M6K:~?  
5)H2@T4NI^WZ)^QI4T^20~>~LNFV^9<~8FE^I^T^<2~B^"A>E~R^F)4 MGL3^YB^%+~&~&S^Y(Z^YC5~T.WUMXD^?CY^J#N6DJ^\*M@C>6~%#  
(M^G+~XULIJZZ>~!8S&C^T^C3~XY3~(Y)^O~"4X46J^>~(44)^MAQ<~1AWM~Q\$5(I^?Z)6XJ^J61^E7L3W^0QL6@6J3;RHN5)5BDP^PES9N31<~J^D  
~H^G!~>~CBKDBBY3(I^D2>~>#3<~1^OLX5NE1=(8167^5~+2ISC>~L1C2+D~MVSQ(F@<08;6VMBBI^K6I^DEW^1%JD@Y2G^I^K4;UCT^I^>D^AS95?  
8(H^FTEZ51)&~\*HJ>~>B75%~HH@AV~JD@INXD M^%4C^@)DMJ7^TEE5^FKER(F@M^I^PN^SH<~J2E^YH^I^#R7^OQK&~EHS5(XN^  
MY;\$;1:A7W6GF;~>I5^PHYWF(8^6O>~(2)A6^1JL5^MQL+~R2LOA1)^5Y M.1^BNIKH^J3V^OIGAC;M)&DP^KJHYU>~\*QL3N>EG3I&  
(K9\$X9R9FRK543U0L^\*MAK4PO+~%GA<~L~L^3&G M^TM^V1K1V^RA)^\*~C7I8F^\$QX9B^AWR9WW@5VSM.G;~J6N6F^C)4TSV^9&3 ME^+~B^>)HFC9~  
H^M4R^YB)2K^HZA5^01F2+^F;F50M1^H1H^T^>~ND26H^I^&D M^H^J3RSPTZLU^TM3\$~AK\$J2#~L2~D\$KRIZOZ^SHG^TVA8KSM~>~L16%B9)>~+~  
M6^H^B1(L^6+~1B~%9>F68~JX^T^787GWJX^I^%3~>NCL+SIU^JG~R^I^C2N~UP>~KI~VY723;Q8DN.2K^<~4B M^KV4H~S2I^  
VPK04C^Y>~HKV167>3>~J23^N^T5VX;4HR^DQ2^D(K@I^P^4U~MG MKA^#287GWJX^I^%3~>NLYXYSE~>~TN9QXA15WFFSEM87AU^Y7Q2^Y\$8H6>~  
MA5~\$E8J^67>8J^J.B>~)M^UEU.LJFJEF^K<68I4.FZ6ON10D^\$G1^G\$CI2UX;8?4~L.M^T^LI@%6.DB5HR M(G)^4I?0+~  
(X&^6&~>W4V7B^J6J^JUB;HR45^168;91~8~PQ4RQ9JEA^P MRL>~5F<5H^\*M9E9^MM(M~>K1L^E%329~96M~^#A4V1^VDMK10^W^YGP^WD+Q  
MAV5&M^I^F~6HN(7D~>~^ICN^R^O^U=>~<~L~U9NFM@CSS>~>~\$^S8O\$UDV!^G\$ MY70K~Z5W>6M+~\$~QS2Z4^\*M~PM;SA6)VV(T^F@I^Q\$>~  
(B)G)N(Q\$X14.YQ~1.M^Z^5L^E~B^I^J5;8@GAR^ZB)^>7V^>VNY)LNP;Y1:3S2Q)4C^4X07K^  
MOHU@B2D(I^P^I^%H^H^K1V1H7K^JH^R9CARUJ^KK^JE~7;SK~+~%Q2YE@T12^M16IVIU^5:Z.MV+2  
9R3QM^V^FU~>JEV.ET^LED^R10PRB1&H(ZUV8M-ID MET)^BYP5VJQZ(QQ^NS83I8EQ&~\$AQ^%X196~U.YRXGBRV8JF99~@DT8U;J3DIQ^X^YDI  
M^MRN5Y^R@F<Z^@MP&PXU9^#(LM^J5J^K7ZQ@Z:RQ3@H)^@Q3YV^O&5QIH2^>)6X12>1T^PLBR^%V  
MNXXK9IQU^U^\*~>J1TVI^I^"8~>7N^C^>@F^I^D+~\*~SZ.YAH+~NO~WKDZ1^J.C+~NW3UZ^F^E@~\$B MBHSI^9^6R3I^KE~>9.VIV^I^Q5C~I^RS  
Y^>TQ41^01&~5QS69P2D(V^"FW;EA#6^#D M3BZY M~J46H^I^M8H~+~Y%Y%~X^I^O\$U^Z;QY640IB4N^J^KM^KL+~QM# M08R5H^>~20L ME^>~Z^>J4.O NZ^W^BS  
&EBX6^J^JNY9^#&Q>~NEE2^@MET^30RB MU?^%CVM^M^WGC^F^>I^#~Z1LG^08?&MB2L4^VYI^ME;DPK~<~A^RPU9&~L^\* M0I8M\$A  
(G15D^FM^ZQKITU(7^2+~#)4J\$Z52~6@S)^M(K7N^J^K4TDG9L^\*YI+~M2I0&210E@P^I^YK\$;~>EYC82^MJD89)^JH5.A20QP^"M(TV^I^AVG;~>MX6%4DH  
M^VJAM~"~\$VY7ZSFJ0+~\*O&~\$CZK4^2JG5.S9~\$E9V94K.46L^L^JT~NT8Q^E M@%YUL~"3HBRI3B^Z2>EQ~\*%NE@<@WNW ME^&~I^T^JPFHR^8%NB^I^B2  
<6I^%985V^>~(R^AAV7^K&N&G^D)52~>~HLMDB0147^M5J^GDU~>I^&+~>~LCHQE^Y^%8Y^KT3I^D^4KIE\$3L5&~2%~D8A2U^%CU^\*~HE M>C^>5GF~  
F^DIYD^A4W89\$RSDMU6JH)^#SDQF^I^HQC^EPMAA957D;4VPL8^JNU M.67~H^\$P\$Z^K^M^K4^4%>D>JZES5~>I^UM^YHY7U^I~J5C4Z26ZRMH~\*8H9UG  
ML10.NM1V9A.T^U^%6;MFA64^J4JBZ.D5^ONG~ECB^B^H^XW\$4C^I^J^Y9T^QM(H^MM&A4^"24^AT)^HONY>3VME8;3XU;9&Q^Y6UBUM3%>~  
<>PGF^B^\*VC^OSAC;M^C~>G0R.\$Y^W2^9)QD15ZDI86QG2~1RS5YEE&>?L9J^OR~1S^RTIDY^HG~>MCQI^YW&77C\$Q;J^M~DY^Y7 MX5X(E?>  
Z&5R)H^G8YBX~M7~>IN^Y^RQF^BO^7Y^#6K^V\$Q>2~7CMQRW^<VLUZ^F^W<4VQ9>~I^ZX3+~>NVYM M^79P~WO78~"3J^I^VH0  
85VB98581R2^LH8(NRN7^F6VQQF6Q;CE^K~(REGP~M^%U9~32%Q^\*M6^M;RS.15^B)^RD)^>7T9&QD<>~\$14FX<33+15PX5;M.M~G52;J^M^C.C~HK5^2  
6@DIES;ZE^V^I^%8N^J^7C1~9.GI^C12YV~TK9.7&I^M^1&UPQ9YTH8I^CE4IA1~1~4B2PN&X^W\$J^GUG^%KNORT^9C)VG8BO4~>~8(^M8+  
(I^8VYD^I^%05~U^&H\$J^G2CT6K63C^HJHVZ(^.DJ^\*W^"K+~^U3F0I6B6Q)^&UU7I^9;S~>~1^M3WT6~^N~FF6WG6  
^V<~3&SEM4^>~C1N05I^3MTC&166\$CL^QLTV9)^>7MPI MK+~>G<9~<~2NURUQ^>~N^\*QQU^>~>~7^N~E4WD^%6B.6EXYTS1L^I^GQDE0  
M9RB2^J^K0G8NV^<~G7^VZ^>(V&Z^299L92N)^V+61^W^DW&X^%54G62^M^X^%N^I^JH9^7K^\$J\$;~>SC%6I9HFV^>~%&MD&G.44Q7~DR^W^9&3A^H3  
M^>I^>V~53G^\*P2)^>0H<~&1^>D^I6I^N5H^Q)2@N7R^W^6H5>8^>M^EY7M^TDW^>95+~>F^I^C8^F70~89I56;4<~<N^I^VE>~>E^I^2EM5^>G>~O^W5^>F^>M^T0)0R  
M^>I^>2&6RP6;4J7MG^I^>~\*3;Z9>HY^>~WY55;C;~>8W@Z;BQ^>N>ONV^R^O^O^DKI  
M6RDI^5;Q0;4S;1A~>Z>M21^UTX^I^H(B9Q54^#~C8U<~3F8X8MQJ>~0IH9I3 MI^"~@V^I^>~+R  
(A^F^H\$^Q2T^4HJX;S%8^HIZ1BW~W6^"T50R~>~)TM)^PR;9L9^M~\*L07W\$C>T141^#U.TU2^M(MI~>~%D6G~>H^K~>~Z570~V0@7QT^H2D&~<~%X>  
M58T^<~@R10NCV45I8Z0YNB>~>XR&L.O9&Z5\$5~R.CCR4C8I7^#O~5%SBJ>~P MU^2J\$^\$HJ&~\*J^R^#V~I^I^>~M027I8^9J\$M(CY\$J7.ZZGK~G0>9.5WK  
M55U328K~LU17@9AH2H^JK~WJD.L.O33R&5Y)X;M0%F^~\*M0^>Z^>U~J4NB1 M^W6F@~@~M)^>~>~+8E.H&~1^HHBA~L^ORL4&7DFRU^>~V15HP0?



M<@Y0C&01"LSCFZ0=%OUPHS99.K(Z9;f=W5#FH)&1-D.12IX;=:GRON55X:3CV#"G"K-M""C4;f-BI-C=:]  
(6"4(R0C-L.C.G.O.QKZS22T1.BJSTP\*YX%>SUD#N4G9>1[P.MA"SIJXS\*4@28E/AM2@10/7O>=-P/CU;9.GJBT4J/AM\*U.ZAA;f;8<  
MVNPAJQHT9W.0>=:9U;+V660+ZGL1.OI96RK/HU-P"Y.Y-3M.TC-L+S/U@<0-W'1#CWA9B(XY&9%M%4REN(?-GULKS'1>-.6E65DKVIV-Q-2<  
R>YC'.P>J8:QQMMA<M/JWRF8%QIN;N>=Z#ZYKG0;=&1L-2)P-13V)K%R5R&.G-P'3G)-OD3R)6BM?M0F8<7DBD\T=F-E?<  
C/DMDR1J5Y4S@>D99.Y.A\1.LT5\*@>Z\*QFGQ8QX9NL=-4B2X.MG2THHJG24\*FIRG.0X%SHH#R#T.M4LFRO.W9PP2E-&N2'6S%>:Z%9;.:f;#<  
(DJBHPIJ;)-QC6(O-M)-PEMBIBV2<=&2MOD%4X13UW.7L"U1%NIZ07;JM-S1D;L\I'G'&<1Y?G-W3?)2&YR25;Y9XC%>fEZRM&D(YUR2'J%501><  
MAPW74VWf;S;..1N<9%S)-8SM3R0IS;RMEZ- UZRVIRVN f>VVVIM87E6%HI MU9CY\*L4#CHGZ1%1H#"7CUTIF)Q-89-<  
V^7+@IQLG\*1%PMML7@=:UVZN'KN.D9F.M@\*H#1BLZ)T'C;MY-PTOTC- OXD.A:7O.K^CQ?P<[UO?KT<J5QM\$9>W#f/ZO3.ML89.W&<  
(A>XFR9CG"%C>L9M;XMW/-K>/:M92O#ME%0)+9N-27"F4HUQ.MLL25UR6HE>4FRT'IB\*H)7L4KV2)W;+<7L>KN/J+BI<-E^A@>I4W;G.K5F<  
M7(C;+1-7YN/RU9D7Z<72B5?>1>0ECDX>MNQL5%3J5>@WM;Y=\*J\*-"Y^Z-M'8JD"GX.QV>R9XJU6P-<  
MPJINUR195>Y8-P'OL&Z5E\AF&NDYUJ9<665W"7H-M'3(Y.OV6UXT5Q)ZNR;ZJ8N5f(4P;P"O)B^AXY;W-M;K??JRDSRI&ZE\*!";@.8U.IfBHR+##>:<  
(AIHO#BE89WK4ZH)D;TM;-I&NMKOG.MKW6L(O-M)C;S-AI2I-2P-XTO>-7)B @X3W-ND7&BEKY<=9V^K52\Q>&<  
MGEDRQ4JLJC-#S^8W%06\*+@BH0N39)2&JAK5E&-S^5Hf#93C^80^4UCY2YR-M=8CHGM;FY-W^>-G>#>BZO?2-8EV(F;f<  
(QKS)6EXVO.%GE.FD9^7OR&.&SZ-Q-M;B-E(NDQ\$YH(Q;->RL-8(4(Y14IR2C9^+EU%F)-&3MCLV(\T^@Y"RU^U<  
M^=18.SY+L%KH&1JY)BH&<48LOGCT\*RM+U2STRYTQ13%U75MU5R7Y;f>22MR4TK\1LE52Z+1%MVX\HHJ)H-V^6?<  
HXHQ3(+;)->V&4LT@TL%>B-N'F.3EY)-MT)QZL4(NA51-Y<S""WKE.H%>IT)\$B\$15R+;A@E.WG-#2-2^OX.A:7O.MK^CQ?<  
P<(ZH\HREFUDJ)JLNI;(F&R0Y6K^GY&@JIMRAJN^2W9Q.(QGT-KMS2(-L;.<8;R.4.HX.X^L'RKR^EAIH\$Q8\$[N(PP-#>Y#9J)Z+{Q22;-}B4I<  
M8L-TIU0f2SA\XX.2X->YIPJ^M&.#YIRK0VCHfE)>JO&.-E/62J604"0EBE-<  
MC\*%C^QB8\UEI7HHA=L5WSM9TREJSFA'6\_-+((D=7)B @XC4GIZ;UN)NA3;O^O72A-M<6f(5T6""Z5<Sf;:O%22>T2E;P\$7K&.VVY6?<  
>V+L>L%6Y3F'K)@fIMZW\Tf-NCUP\A[f\*0VPfOW;-\*VZ#%NWQU8.ZQTO4.5T&+R47MJ6-7RW3-<  
#JUIM\*471\*5%NF\X3C(&15%NF\X3VZ-2H f-/EKf#3%2Qf-8RPHfPA096\$N.KIY3;1%1U?5;S-<  
M-NQSDM1@.6B)-fF1V4f\VZ->7MXC-P%K;1fJ2L&X.MAKV36K;1V2-P2IF\*QTNWV&5F<3.W>.<2<86JUB2(C+\*19SR\*DEf<-M.WC\*<  
M.-<09+NVWf;RLV0;=5.ZR+[\$57E9;CX+1&(S+%-2)&-PI5J5T-5Yf(&+3I.M@I9ZS"37\*L8KZ-\*EZL+Q9T4FV#8\*EO\{S\*.\*EB?<  
<5GS+^WAG3;MRP>T.MW(\U8?Qf8(>C9f8P%G);KQ;UE6(12%6>.\*@T%#D#)QK^RA2""V;%31\$Y"").M)2&A^TC/1006)3W7<-<  
LOCX6U5M5VMWGC(31NWR8\$""T-.UM;W:6G;8LS76.M59-\$%fH+J(AY^WFJ9^IY);-QF5-N\3-)9%3WB-^LOSO.WIOMRF6%HI0^25NVL-MK#<  
(3)50Y5RV>MX;MD3C)\*.G7@JRBKFW;)-"60#LJQP'8#KJ\$G/E);G/M\$-f5.HU2U6NQ@fZ.MI&QPMVPJG)4G"J'H'B""Z<->Y>W@8K@;fEW(>.;H<  
M2IEUS9Y@/-@390.6/-G6Y^9BSfE.NOM4L>6%&V6J8;@X^BOMHICAP\XWA8SK?)\*7SjMLVW;H<14FOY.P.O<  
MG->#;6Z8VM5fCJ1.W\*1YR0@V8RD0"-K5KD57;7&N^4MCN;MK)DJXTJ?>0MDfZ.US^4#264-Tf)Q3GZ-f%LW(f;L:9E:5;^6X2X4>)f^"VMV1;JK392Q1-<  
A.MLD2JHQOKW%jNQX2)A1.75D1>OP5=\*+(-1L-DK-G>-N;2GPSC.ZOZ%>IPD;HJ.X0WZ9)S#C6W;3)B-GC<<8JPCE5fFS.M#3N7L-<  
f^ZM@2>X.O.Q<->U^fRCMX5^G"">V%6B6^D@\*f4CGD)5NJG7M^2;.:U#M/H4-M-VWCGf.Y?-<  
Y&+^P8P0H)R(SQA3^5G>M8BCJfWZQ-2fUK#E#V7->f-M<(RSE-3;=Q6.V<=>YTAH;-%LJLfCF/2QYG);X+<@%YE">9WB2(E;f>)^\*RD-M)<  
(U9VQ)M%\*X-31%;-R-(PPQHG6M&UJfTYZM0Z-MO>T-f(E;BQN9R&E-WUG&UIQ5MEfVZLN0EPH^fZf-8&JMH)CYM5:@T5N-<  
MEJG^QM85-SCBT-O>LXU?%);R-EWR.D.M99>V1U/S^.;GDBJW>"O"1R5B^87O^40G.HV%2M15ROA^JBNT@9NO2S^T.M1^4Hf-O^&E^D^1?<  
P-XTO>-7)B @X4Cf;LWR51^9D.fVY8J8P-ZJM-N\$M.SM)2U^RM8NRQ3688-Y^K6&.GYVNS\*+5VDG)0DPQ;2<8^\*LS>-TETCEU>f<  
M+^fWQ-L/fJ+"PIQJ^O&";2.8&XfVf8I9RC^&%Zf6;4HK-3#R2ETfH5(MQ&+C2^+^#A;fL+^fWQ-L/fJ+"W&CV%NTfXNV^U%AZ<  
fC2GM&CMY.P-)(-f^WO.M&fSjH^7^"826f3OBf8?>N%>A?Gf1fW=-V7;#ZBPQ<->4JHT-O^&E.M^D^1^f8C2fYU?<  
T+^#A;fL+^fWQ-L/fJ+ZBPQfQfA;M^+MA-P#46%N->\*T.M.WG-#2-2^OX.A:7O.K^CQ?P<A)A;M^+MA^f87X?T-PMVG?%VP-^HL+<  
M<->4JHT-OA^A2I^?P-XTO>-7)B @X3#f'W;=V7;#P^HL+<-P+NDVGfM;CMQSC9JU@O%T'8(+%EUE8:9BZ-\$Y^+DF<  
(Y7;fT-M)%6SINJ4JB^Z1BJ.M)f#B4=.;35O^JZKN^YD#ZNI^5YIC""#;+09HP09&((-KD\$9X;YZ5;5+1MP%2L""QI\$50((G8@>@A.@>A^f<  
(B;fTfH2f&Y;6;+9R0V&f-34R\$20<->MNUAN5L1KJ>K%9A4G/9B2MSR%>.;152-)QV3-S/5K+PC);&77NTfIKJ&VXQ&E.MQ25S^V;9H^L;C5)>8A=-<  
<8G(f1ZA>+f;8NLT3&QGCfA)0fBG)\*XJO72-5L.M+>+Mf1QZf-PK)(.UDG>2\$;+MPG1TX@Q&SCZV)->585<.#6>ME8&(7J<  
MQ.Y48R^VZL^E7V^EXQf-68fTfBPfU7JU#4+19;+1MPS.PP1+;R7YZ&GBM.R8R5S-K+ZM+(-BD82-S^62E3-2J34K\$FO"23f\$<  
M228U)j)3))C/%JW+^Pf\$O&f5VN^X8N^).KX.RfD2D9E85I&-A39.QDCBSfTK&<M9LJVWVRV-RDS8XZ?J)Bf7A-MO)S-<  
YKf(-)6105GCY7#fIE-ABVCX^fHWf5UI^Yf;18J0;U6S^ZLfOMJ3;MNML8(SD)3H1X9OQ@GZf)0D>V^N;EUOZ\$DL5A;GC.F8;@;=-X.O.P5K-REU<  
MQ.4fG4<6WG\$>+49^YHQ<15EVfVfJR42A9L86ES\$W^PNL2U""f6NMW%P-MT\*DRG6K95PZ-K)QO^&E^D^1^#CO&fSjH^7^&8<  
<47K8;DQO7Q\VC">Y.M04P^f1K/M)-R8K>2L7fG1VBMJ;3DXf9Y299^S3%6BN4^3KfUE99UPQKS-M13R8D780/HYOL71-TS%32UX?P7@#+-<  
&MLO&M8f9H^62Gf4C8H&A^fM.M.M.LfJM(K8W15NL;-f^E^NSMf7L%>8Xf.MN@fB^732-fME5)B)JHfTY87fU-O^&E^D^1^fWC2fYU?T+<  
M^#A4D>XZ^Z7DV<-\$fHf\$1+24f5Z;CHS%&(O9)U.O-4M<7(1f-E6%E7U;25.M6f4RRfVfH5;J>+3;2YfYHf)-M72BJ0V6f31-3MA-P^"-P^fL+^fVO?>P^O<  
M@XAWZ0-1MBV;-XfYV(S)ALDPG415Y;2315T91WTH1XWfQ\$>1X<-X-M%W;WG-#2-2^@fQfZ>ZOZ%>fPFA^%NTfXNV^187^XT-PMVG?<  
%VP+^Mf+"W&E^;S-AI2I-2^>+WG5-1XOX.SP^PMVG?%VP-M^+<->86f3MOBf8?46%N^>T.WG-^TOTC-OX.A:7O.K^CQ2<  
P<A)A;M^+MA^46%MN-L+^fWQ-L/fJ+"PIQJ3VCV1X-X:Z7I-W+>+WG5-1XOX.SP^PMVG?%VP-M^+J+^W&CV%NTfXNV^187^XTfHfHf>2<  
+)(P<@fQfZ>ZOZ%>fP^fMV%NTfXNV^U%AZfC38NYC%>f4.MZ5fXTHf9HL);<.\*R\$;5HAH^WLD7);<  
M.TfY09HD6=-U22;@LSfS^GR&K)-6Q%>T)96G(M;21AVfPSLIT0XZ\$1&MU;T5)7BKP1N+54fXXHT8-Rf)"RJ#U0f>HXR1L^f<  
MTA2fH6=-C%56-OWT>6;.\*NX7(>fEWBP2^MPOO(Kf7)>Z"">5.S;+17^O#8SG;G#9)LFUZF1Q^f7FO-5;=4W#J7;BW1>R4H.MSHPP>\$7Xf1^=QN;0\$!<  
fP^fTf8;<+fX%#LL)UZFQ\$7.P^U^Hf8A)f/M9RLfQCY\$S-f248-0<Zf%VW;9fRS-H+G^C)>Y(fETWN^VY-SAX?ZA^<  
MU71^3fEQfGLM;""H8^7LMNZ5;fVMN9-WGf3^A^fUf-R;S#>GDU);(MQO5Q.MW@16(O)%M7A8^9NYP^K-<  
HfH)GHME-f1%K>X(fOB85J5X;fTHMLC;2-MRQC^JLRLNY;:RMIN;1L62U;f3.G^YB95+.\*@P=-(Q-fGf)DJf;Q\$=\*GF-O^2<  
5)\$;Z+^M0#T.A(2U4%Y^QCH;S^HUS#MI&O-M^NU4&^2MXEXfCS^D7V1RC^NG^)-4K5-5(fP^FF""(3@>+>Y+W^4-(XO\$^MfXf)X;.:27\$3EF?I-;fG-?<  
fG<=<A>=U^M-W(fUA4KE;#3MfAD\$WNLBD.MLIR^QfB)B;Q-8RVP&VfTfMS8>AJW(DCH2Y5fZLG69+1%0K#fHND-K-29W13%<  
M>0f4G?D>Tf>Z;fZIN^GDPfMLB^@.GE^N;K^fK7RG^W(MJN-K&fHEf-6fMKW^JONfE-UC^-\$R04-55@S;SE^K3fT(7B;f;W>Z^A^O1O?<  
W)->QZXZ.MW@-63@&0E#AWAP^N->""4.X-!Q\$)QK3>E>@fYV;+<1^>(E8)6P.MQO^F9Vf1.NCf@fAT^MPQE^<  
fO^H2H?>fRM3fE^YfJfRJ&EX0@%LAC>?6MCG^79.MXX-B;Q;0L=-fK5^R3Z9R^TASG(67>C@S)(Y).M9XC%NQNfHJ6fGR&+(-<  
M%=-/Mf1^%#UJVRNUJfQ;6CJ1=\*U<+53V;J-A9R3RTPK9W\$Q7JR<0-R%YBAP^M>><0^X^>3@<-X^M5A(3AP\$OVHf;B;0^7B\$>10^O?<  
X)fPUGTRNZ;M-HZf(-fE5K5RfQF9LL;@S)9MJMfP;.&C1P<&C1H.MT<fHT;fP;H4^T^35>J%M#>DT<#;^R;fOW2#^\*8-1fSIR3;fR;fOW<  
M2#^\*8-1fSIR3fYfA^W-7^fT\$;fM%?E%>f76>#fHUC-"M8Y2H8RR);<  
MH4&P5@9HMOH.2#U\$[fA;G^UN5E&-T\$U4%#VPNVB;f52+Hf51YfRfHB#>W1.M2f^B^N=-@HSfK\$?<  
XGB19@fJLOR0L;#fJ2;fJ2fG%""\$^SAHXAY0<-0-MJMT-2Y2RSNY;1.W3D6;3-Q)J^N\$E#^41RB<\$4P.ZXL^M.MZ3-<  
(>4/G#1Q^RAfX.B^Q-32;^7^LHSP.H@\*GNCAC^Q)<^<#>Q>3(QA^fMH;E.H@4P^fIXZ^UUZ^"B-\*&K1@ES4^7UQf9L+C.J)f)(#Hf7-<  
F8AU/OA^T-#4@ONS5TK>M0(fYfAR;\$f"Mus;")2%\$0^RKfZM^53^K-fS3;MSC;56fSG.M^%3)f98D^E^KOJW;\*^<  
Z;AQ@f;H.8Z>J>2O7K^A)2^fK^Q089P;fJKE-M+9G^A^fA^fD-2.O&Q)XAY0^<-\$^SAHfOBGU8-4K8^J&fJ(fP^9NQ\$16Rf><  
M.C71@LH80""@<N8RfH)fP45&XCPZf0^8ERG@>.;1-M27;UV3KfK5KMU^Z(f12D62R1-AYDU^T^LNDP6(0^0%Q);"(O^%;G02055)<  
M\$;fY69N@fH08P1DGITZf9fIXQLS4J9Q.K.CfDf09^A5688R^2.MLI.PYE^0-M;4H1^E-U?#@f8.-@%WX>Z0fLW8HfLTOC^Y<.<  
f6X^9fCZ5^Mf3P1(fMJ@fL.B>U.S4?>fA1<9J\$2^fS^R2O.4HK-RSfJ2QO>fJfD.Nf\$3UJf78@.;MO12^COY^#PVCYRT>66.%1\$>O@D>-2.V-&J2^f(A<  
MW-fW2;fJU7N+7P;35O^JZKN^YD#ZNI^5YfTK>fU7EJ.M.MB#f)%NO#Yf3M;fV3<-G.%fUK;S^9O^GT9Cf^TG^f(fUK;S^9O^GT9Cf^M^;UG<-<  
f+^+GBfK;V&^AG6fL3^fADV9^XfYfW@>Gf@-DC\$U-B^E^YPT<0H?>fH833fT>MD\$%\$fQGM^fHf)->DfLOKfT^G7\$P)f\$S@Q^+^#KQ\$?fTfCH<-<  
EW)AKX;fH5QfT89fV^XCD3?(>4/G#1Q-M^RAfX-B-SO38fPJCL&LJfSE-N^5KZfH.XEf14^\$8-RE^YCG.YDA^Q>X^JP.MO#&;CP(41^NOMD^U.7@fOVT?<  
9JH>fQX^G^M.MJMS^1N\$K6D3.Q<LZ.C@<=<60L.P^H?Y<#fJVQfXAY0^<-\$^SAK6f6?<  
MU;AN;14ZFEf;8R^8\$^/K6H-BU3^=W^C&0TG^fI@41XAW2O\$X^PXCW9.Q;Z.MJ^WfW2ON;-<+>;JO\$<-%<  
(QHE#WfPQ(H@4f)6HY<6U\$C4#E.P@N^9AX#fE^fM#Q-UM(fN2^5GK3-&SE38^8RfVC5U3^5O6H\$^\$SVZUR&fM^KE(&-CGfQ\$EAI2fXR-F""#G;f<-<  
f^WB^E^YPT<0Hf2&M;):5FE^;fHf;X.MOEfENZ.fX^%f3H-2f%>@>f4-O13f<+>f4HfU^fHE;9^#AQR^CBGU9^6fTfKE<-<  
M+^%3G^13(DYf^")JfJ\$SCBN!\*&33;L^fQF%2BH;fB^E2XVE54JO5KM^Y\$#<-%;9HXf;04%(P7^9@f;E^#&^\*^fTDNYU(RP;JL;D(1^MAT^fFRIC;f;8@<-<  
MJ^0D?Z3fF^Q^SEf1^E-;JNAVfLAK9<fDH5<@PZf05f4\$>fJQ&XAY0^M-S^fS^GR&K)-6Q.M%>9TS.O9f9CSY;5D-K8BM)Z2f2<  
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894M&TK4-fECO58fYQO2Q-fHDfE8Qf69%QNH^#(Q8JQ(SA3M.\*-MS9JNfTM3@AfW9;+4DEDfC18"";3J7S)%fWB^fAB^CHG0-2SPKfU03N+^\*D-<  
MVC#J;G5f<(>#>KfPZGCRE5fB^G^03B00^4QfT8^")@NZ.Z>3<.%K.C^AB)M/GfN=-WDf>1)RD^J20PB#f15.8H^CX#Jf&QAI-W+1P^QCf\$E4Q^2<



G M2<-%141(BJ4>IN)E(F63:04N50YDYN:(Q7N)Q OKKN\*&CLFVTL/M9/P@B@  
MM[9]ISDGC2YJRT225KV7KU&6MSYVH(CF44:NHOAV82+),%6984FJKI&D\*F&=-\$L9XJY%4TSH9JBP'Q2'@'#B(I>3;K+L'(A  
ME#H#X@)WAWJ]<(<Y#YI4>Y8TYI]JZ-HI9+J)NFFI/B5H4G&"1C:49U.3Y0#Q M->\*G:LB[K\*Q6&(<+I#31IMZ-  
F:2IRPR.I5<6#GIUXY\$M2M-H79\*QL-GI'M'N=3J6X.9L5RJ8P%2Y'DE9-HPG\*RW2+;0 M<8I.%<"S87MZZE68G\*4QI@-Y019ID4YN?LW6'NC%#  
I7477J"@89I=DRE M4DXH'E9I17Z\$RJ=-B4 30I-X7IAZP\_8Q\*Wf0H8QA\*-<1 P-DTT\*G5HO9U6I6  
M2>7IAJOL8I'IQ@)NG)DD/W28JN-I>4Vf,A9G'MIEWK@C9&+R:MIEE78QOJ9T;H.N:9 M0I1(MB/D7'8.HXPA(HZ:JQG">04'J>XUT)V(TRJ.%6&+X-  
N=98TF6V82)M/5S\*4#1'DB:B#82CS@FH5\$G>+IR<+HIN\*E:NO?HTI/UUY%4QI.KC6I  
MSA8VD#P7P6\$\*\_.LZYR5WL\$;G>FEZEJMVTFI\_863EH1\*OLYK8'B#\*L1G M8QL4(-264;\$S=-I67B'Q4S)J;I)@DLU6I,  
MGRG:0RH'I)P\*F4W#B\$#H4IBFD(XBH1%NNZH'I'Q>+J4'BAU#AUA3'8 M'XIO'2^,1XU2,3;GMP6'(BWO>)C69NNI@('F'F5BL'XIAP'I'9@77:8"<  
M9B<'HL9B'2'-%>-(F@)(2XNBPZ6XVA206P/GZKU@)S=SACR59N%>8NH'NI903 MCBPK\_-WA'P\$(IYVONQ3\_P'HLF'+3I-BHL0QC?88X%DC&X--KUL'  
MG'FEE74D)MW<35-I&G@>X3,JE+5CRBUF(3IUCIGA.OV'>DI/M4(0K1LU MVD63-J5I=-35.NHIQ43.DD5,3<-\*Z0>#'+371Q)D+N96Y6Y6ZRF+  
I@<+MH'Y7@&5JHG1)S&U'1H'F'>I>A3#S\$Y0\$0L' T\$Y>\_J\*Y@K5JE0U8Q'M8;  
(R5& HI'^(XZ?Q/-#\*?&-)JO5'GVAOR:@+I+PV LF@IT@ RCV/T?S-W7\_301IND\*F5470I=-9X-8RS-D5?>4D3B(%5QS> M4S"@>@52I3)\$!\$!-'W"  
C("W#WB'ZR;K'&7@>2P/RB0S>Q2?I#2Y<-6A8WKJ;9ERF'F&\$4 MU5(1)-82'K5 B0<4AV'9P10>S&X)AUBW.Y4(<-"@QI MQZ8&0%2KG1'"CDZB?<  
NN4#I>93I6I1#B>VfI'G%IX8RR-D'N6'HEF@G'W M'N'XRS4<#X&->ZHI-O5'I'F@&2@RSN2D\$Q(C899H>T&2IC1&8@AR=IB  
N(VW)2@J,2->I+P4S:22T5.I10\$>;6I'X,VJ(H04R69L'XGR\*W'<N1O1Q55'[,35.41ZU) C%7P M'U'JH78& W#>8O>-8YD13JH%IDF0'-\%6+-%  
(H0RIB8LR9JIUHD554\_5 M(PQ>:G4@X4RE122'D01+0Q>X\$9105ID 2#4A)JL%HQ\*SK9\*\_.L@'IOJRM8\*VIU@&7H>)Z4N7FEJZT\$;  
Y0(QI=-XE832QEH'BRBSHK-H-(->40+S)RWKCL@FH0.IQ1\$8D\$FY@'IY#HMTS'8I M;P\*IU4QXW\$LC"Q%(<T/RB'DU3AS'L3AR3K2)`EY5.5\$  
MQAWCR<\*\_L+3\$PYD@F%I ZI\*E\$D3'0>INR\*L1PDZIO%D5B\*@"T%\$CD M,0X'8@E\$X,F2G-O'F'6:N87H'IO#Q9KU8UJ6VN2-  
IYCHQ5%4;C+SC94W MPCUB E\_@8P'8\_EE438KLGQ<0I,<IIML M&SHEJEP9C2(7XEX'7@NTK9%AM W'WBH)AX<1\$-15S49.A(DF=  
(E.8,2I'>I2">)IU2=SI\$SYIGHI1TN"@ M8H%EFF%BW:L'D(UA4\*%,(239)UXZD(-F92292/5M% MV;N#;N19<=@>5&!'\$4RE5'\*=NU,?  
S=PER@>VZN8W6G\_E'W'L'AM O=>#I'J-S&MLT'Y\*COKYNUQVGBI>+JUHS9JTYEGDEV1H25C8A%JM'Q#;S MAZ0SLC920<(E2;\$4#KCLS:9\$WC?  
<@YRC("FME.ELB%\*ZI6'J2'-(8I MFI(Z9NK'53)T'4J@%47,-JT>6RVDW>W;L\$XKO\*X+%.R:N5SV8(POC&P  
MR(K#H.'SISHA&O4.I)I)38K-BK@I\$?>S.&\*%5I=-%5%VNRAG:423Q M?I WJO5I/%G<&JH4'C:H0'<?Y<&DU;Q>JIA P'SF0H(I7I2:MX-O5  
M=P YG@>2I]W:O18@>I?KPKWN>T?R:2?IDW9VA>I'VA F:QYI&8 2C)SVMA>I'VA F:QYI&8 2C 8S>RR G' 643I]U/DT'I)>FIXB\_ZR?  
I%4QKZK9C BR#I#N3-B5\*0RGDQ-PH'ZA@>H>6)PLJN'0"<4RN'\$J\_5I'ISI<"JIO.P5  
M4 R?I8G<(M-H(MP.GGDY/-E'"M2YR.HOX\$D;)%6N\$Z8Z2"(2SI4S>?2K  
MR)?>G\*\*@J@>@8NM@<@G:-5;\_4SUP7S\_Y&+AO(3D^X:7SR@>30C&,-N\$FO(DS.N#8KPR#3KA5N6@1%>JE(6-X'P(G0.VBTCH@ M01+P,B9I  
I2(90P&)>KRI6%((I1J+-VH<(\$IFT\*ED)Y^I'7 MJI,S.NT6"IL'W@DHP<6F7.U6C0I6('LY9APRT3E\*1WAM:I"2:;I)29F  
M4@&I&-8XIF%62-5T)A+T'52W.69UEFI'DQ4Z89;MI<+U54\_45NMUI-1Q78I-)++ZTPZE\$J8N0\$YI\$&7I3I93I2&N.9L%4F  
M4I.5>)I)9\$FB9.YDS@HREFS1R42\*%F?I'P\*(#K+I>I]M-LXQ'S6 M>8O2/DVZC;N.F=0QC&IUR0DR/(,)&I)@HF/4:&(\$3\$I  
M2I\*\_\*>@9XA>2)IES>[I]V\_BI[V]ETAH-OK6-PNO&X')\$6I(8I'F'X MUYU3Q:O CVYZO@>G'4W:OFBK8F-1\_RRK @IVZ;N(C  
I'Q@>D)DN42KV.4,3\*W4\*>\_QQW(\*)NXXB-,I'QI'0X M'(ZGON 4\_PIT9B>^,IA9\_3P62IY9PGN&O%V)YGM9W\_-  
M9>L4VEOGRV#7D2=-JYIP0I,-AVU'U/WTU+IL,7L'P;\*\_MI\*15;@ULMW% M84Q'Q1<)6JPRK5P\$YNM;F'X')3@8H.\$FK5\*T8CTR-EG  
(O-LI'JA@SG\*\* M&\*I\$S8.HJE55AT9P)'QFT\*Y/3.ITXE@0AP'T'M.5'4I\$62QL&'FIY'I)AB&  
M+\*I\$&FXF9Z9L+Y62F9%\$S(%C\_BVZF8N88\$INP\_V#5#2#E'G-TTY2BM(BUE3JHJ,26%FQD%X P.M:9%>MDI9MD8U8R#E+54/IJ)-  
A>+1'ICO9N87I'Q'IE=57L'QXW M1)QY>#I\*MBX 2>+XW6I0I@>=>I'G^I'H#%>GI'K5G;I-RIK%K;\_1\$C9 M4@&\$10"A'PC5\_4V77J(\$?RIE-  
FV0XE#R-BRUIK4MIV7UKR<M.B0IY0T'>T9?2X\_EB\_+ZA5I/4D5^E7IPQDIO&E-0N'8<7>.<@>\$V9I) MPH#A3'90I'92I  
<B5D\$U)Y"Q\*1+S-VI#RS.OVJT:8A%FCJIR(<16Y3-7" M2@&(15,P%EJE'9OR P"=1\*0E1&?M9I>E\*%>X4M\*SPLH@ZZI)(FE8;I'Y9  
MS;B0I'V'X'&-2F\$B8Q+59I)&- %V MX52.0W8NRE6<%(B;J'MYE&@HF<%(QD.0I'4H4'>TMSH4TUMCM;SUI'\$S  
M&H&(&\_\*J;\_\*I-3I]UJIB\$(1RB)R'IN\*8#N=99V-BNHFLY14(TU4#N)N)3J)\*B0@>?E;AOW+5437Y)'''TC MZG96<\_X-  
6F2I'HK@>I'ELPSD(I4L6%8US2JINOX>T6\*\_\*P\_MN94574V'I AJW'DI4QB'>T;NII MH02H+\_'D12" GP18FM;E;H\_47-V0-L-3NS4UAGP'BYJDN?<  
+3?@R.MLY'7G>I.M\$45BIC%\$O+U9"##&@F;AD.P1<H4PIF4.#@9(+NX.Q+IN+4I:2H@4(ZI>@JF8IY5Z-AY>T+LN  
M)IB1E59(U4<3)\*#F3%.9H\_OY'K)\*RI"TDQ5A:CGX2X0RA'9AT4CQI@&82 M3(PEI7G16ZD#Z,85'IE#4>7OXB(A224LS>%.#N,W\*:@SY"J3X2=0V'3 M1  
JAI'96-K'>F8+QO.4JO\$5%<E'F'8IX<+<+ZIKZ\*)-F80ITSW>B)EIS\*MTIICDC'W.0I'7 I<6VGR>I'F%(3%GU;IB&+O%>E\_\*6;+ZJKY25I8X4I\$6YR  
M94.-%>QI)E)Q\*(E;=I;K(8AN'R\$U/<I\$3:(K RO\*)H98A(J'R'O5 MW48<996\*MC HAW#D.IP6(-#F0Q3P'6\*7URH;81R<=>2\*0I5.DN'I+=5P  
M.CI+ 4P6PK.UU)5G)Y8-TEMKG1-QIHO\$QC&Y4VLF.IAB \$IY3L4I'4E MX)SEI(+S)DI.B9JT9E(I( GJN-XUJ2H-# CU#Z1P>+F'J#IEXHODI  
MS'W'P'+\*N;LW;(-)HI@>I)S#<3\$S!P#ZK'PUMJO6X>ZU7.7EQ("6>6E\_9BLXOPK\$U>TK3-2X'f>YD",&P'RP>PI'8 Z=V  
MM'IXJN\$#EIG1W5"\*=B0025L'XVIF\$S(G\$U844\*IN'B0KE(1\*->IR MB;\_&D)B63?\_COA0LA5-R1%0I(-X'D89'T)I+>8QQB2 M\_&9V;)\*RNIMD8)R6'49)  
(XEHCH>B\_QXD5\*N)MM25\*40Y5+5CIE?G'RBf MO;MD<O'>V'L)N#EX">C.N4MINW+5MA\$F\_-8XON0&3-BIYC\*@TFH  
MX6(ED;)'PIE7A:U#\_OR64-BL(H'0D<+N%P6(446ZJA8\*N9?>?2=9U>5VI8S MJN(MO49(RG@Z6#U-  
F+ED;Q.HVTO2PXB8R)YKGP1455FR+U>822B(T\$ M#H\$YVYUQI@Q?D%>2I@J=H7\_K1BI\*\_UQ=EM4(229(2YB6;EH%TFU  
MFL@UEH-BIV'3AHI;M7J0-T)W0.0M3=2VBPK2HPA5WWLP\*LDAW#9AL9\$ MY8I25R.\*CS5I;=-4%6'FB-HI3V&\_\*L\*R\*ZLJIAF=5903(NS(<\_I'W#?<  
IO\* MRGLCU CO#LZOK.L\$1450'E ISB8.#>=>(R MI'N3I7IO\*MC(BBIA5A-)A>2B8QDBH;20JG;H.0QS(N>)BE<%(3/U)'TY@ MI'293E?<  
U#QI'0W:2YG K(->(GRGQDCKPMR5\_4Q&I@Z)P\_MJ;+\$\_>22+U9R'4Y>=-4\*2&-)JO5'GVAOR:KO%NX;2V32>Z0YI'I'Z/N=-MLZ;6^8NR  
M0)N'ZP;EQ\$PB'\_K9E'&0 P'>#QBI\$>I'P'-%K(FLIY)H@>#U&K31>+\*K;#%K(F7'f;FG>S%&28 Y%>907C'''5HLO M'X\$=&<4UA>  
(-NNIE'I'JA CY05I)H\$1B 8 M'&0&R&\*&I(RC3PS4H@I098C'0180&A2K'I)(\$=4,&Z M14B4Y=P&2?B3\_X3DL2 I'@\*00@QQV  
^6\*66>I5IIC9%G\$Y\*QZ@>I;5N6D3N&I M3+0(DLBO)5^7@BLHDEVE)%Y%R2\_54C%9-I?^/5E\$FM>\_L I'Q-Y5@9\* MP1=2  
G7958RL9%>4K5%>D\$U" WKDV(9ZRBUBI\_ I'JY@Y2.5>I(HOU>TE> M0C9+G(E@JL'N(Q'XP#GJ%N)V68,0""(%\*MO(9D\*2M(A'RA'3D@<  
MGPO4VJHFG6D&<=>N'YQ.IU7%IJ-MDOB#(IH)CPS@P@ETK%I'BYGP6R\*U;''' MEOF'1W'&5ZQ\_Y4TG'+I2K;V3J-6Q83;YNEDEEDBJ4)&Y'-0V?<  
=>OE>90B,08&A8;QIV\* JQ7\$S\_9\$# MI@>I'V=5K'JN'HFU'G'ZXHMW%9P<56<=>F'Y7NCFRREZ)ZGN&W01%?? MF2>  
(5I)XNED6'IR@T8\$>2Z NP>I'6E8O.#79>2T\_'PW'<K&\_#EIL54A30W MEIC\*K'KZK Q6S.LRQYLSR))N'YIM=7@>@I5I'Q  
MG2\_%JLAT /DJN0QULQIT'D\*P8XHf+W;QYMM5KJ85Z@V'Y66.8EIE0ZQ)J M.Y'I'NF64\_X'9Vf6'R39K)N%W+SROJ8OHR:6BBA)PV>+F'IJ2IDX#<  
<(\*HS9'GGIXRI'PXF'IR"CKH;=NASZ,I4W#;I<8SNT>DYBI86D-O2 M%\*2GKAEEW\*JDO\*AN%HO6I2/R#JR?;I@2'DH9)5BWXMVH@>(HX'#S&  
(D\* MI@>I;X8+Y9\$P'N'0?B'>COWGEBAF-U\$K;F1'L.48A2\_6PZY&\_MG@G#0  
MUGJ@>=I-BZ3@>4\_\*DFH=7LJG3&N2Y=U3;Y.%5IO\_%MFY63>I48Y'00 MXB@4?5+O3A(F'6QC3B\*Z)KM&\*;HXJ]JIS@D3W-BH'E6Y  
M@&9X+N'>Q'A<C:Z\_%Z466+LI3&G;L8=6 M1ZEN\_T'YJN4G9C9+>MUIPHE\$6Nf\_Y-9&9CYJP.X'65&VQIK  
F0.6I>I)\*\_I19%\*^M:413SY@>BIJ1 M9RWR35.82N2KG0\*9 P#9%4\$5H\$3+>#B;M\*8^@G2I]RO7\*C\$A85.O)2'BJS:&3+OI\$@#>NGSL3)F  
M-K(DSWM5FYHfYQ;^@Z2(BQ5RG66Z(-GBJZW7ND2-IE\$UR@>RSS(L'M#)FX+ MJ\$QSG'AB#M(BDQG6\_5\*+\*I9@FT+X))(<I%5+I/X-  
5ZH3'U'3 N#5>M M4>C'VB'Q#@TFK>I]U7M>?S X'X'C;2HFDYI00=M>?S X'X'C;2HFL9Q9 M9?SC K'@I'ZGR;#I]DQ'S4 R2I8G\_B)ZUP>CA'\$4I;I  
I)I=EF9WZ-ZO\$C;M>RB#P8UVXN4P>-CW@F03\$LX7I\$T@8GNU.I.U;@>F'OV'OB+ KI\_A GK3\_9FMHIEO?W&4B<f0YL%KS)F'P-  
S#NHRJ\$S\_YL-XJC5I.JN'Z'NT9\_PR3@O'G'S\*2\$YIAO&5)&>(G52\$ 2T4R MOVO-D3P5@9%9LI<I.3UW  
M%4\$0'P@>8-91BY3W12&6XD\$ 6-8\*'\$J29DN4H@<M\$#&I\*3J'>I'(E'HFx>5K/79P'X%Q'CO'Y5>F02<\_U@3CJ0IX\$D+&C#  
M1\$GW2KZBHZE@RIY:0-1MSU8D9I778K56RCODV\$UH'F;7ZF+RC9\_-%>\_<  
MKB255(8X%>PAYE@C(I1X'"+>C3PDH(B@223,5N5\$GUNT U3S>6FC8f.V MW\*+N#I!0Q7T(BA2%4>F-)TDVH)UJYM+''ID\*NX\*0I;\_\*I\*4-2A-'  
M5W\*2XRBEV5%>E&G);>CPLY'0=5VAQ5\_ZK>V3FAHf>US=(M'DY7T6O\_XD+I  
MS8Q4'I]GLI9MHJ3O'\_BE\_9B3>'E\_AQ'MN]5DX13\$HBI.8Q\$3FX#Q'1^#%\$J3&=&KN'01N5I5IN7H.GY M.HG4I\$38.6;  
(?'>2N5)%N\$>/\$>JWVO#AQ'30A-QI;(88%>A-P M\$Y=-3XL@'\$15D>O69W;I\$CEWVJ3VN'H'0">5\$)R'JCUH8X&P2'68+Z MJ7M(C18I  
MNR'VEF;4K-U(E<(N#JME&EY6WU%>TFDJY>>MC'SBI'E3'+1 6B94L,FT\*(M'15I\_P'O F3HP#W@>P@>P'0WGTZ-  
0NACZ\_V'W>\*84VOO-FH3+&EY9ZRXW MGT\$9U-I JY3'4-IYZF6'R@NL&@&I\$3IQ6.33M)CO""(I'E'J-AGH'P;K'#  
M8I7HY-L:R@JG'GLE8GK'H'B("F D6RVP\_5B'E\$H')I'1(4@>S'OPDDCB\*IB  
M'NW'M7C(R8)'MN;\_I'ZL9P1U'X&GJINEKRI7I'ZVWNC9I5L\*7Z@MLSQ @K'R0'2\*+>#N9F\*QTD3NBYM2&CFIC&FVR'^C/  
MV'XVN&G)AO'F/K5#R+U-I'G#(UB>CZLE+O>+>+E:UB) MC#>5E%D6S-HX44'H.0Y2W1&W>9NGNNYI7'W(I)2S;^538@<  
M4.I\$CN%1PSD'PT.09EIK%>H19>4@5I;JH4\_\*XOV'>\*\_VR9I.4RA4EE' M7H7QE+ O'4 2#I,VCUM8')>#QI>7%PS2+I23LOQY5X'3 M67\*  
(+I]HB&AZLPJ\$YNI'9'F'>3\*#R>\_Y2>\_E'@>0=HSD'T.H'7>XSD9 MIR'/\$<Y'QC'9@>N75.PJ'IDKM/\)P0?&RG/(BSNQXFO3-V)GWYF#  
MDQ63\*MB\*T\$H>S(S'GR8K) 6Q%>K>G'SG'IS-H>+7KWM'>?JOI9>\_I=&M'PFA\_\*S;\_3I33C'FX.C#>X3?>



E&YM JHQ 2=VVWV\*Q12%- G071\$@%\*0;6=-JMNX?;?D"?R)M=-V.OOG:3MHZ:1DJM@Y\$&"C)@B9N15N\*A5(1M^C0SRNRO!%.\*R:C9W+^0  
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M/JI\*J0PHIG.4Cf@<(T/H(ZG<+ISB>MFUFW#fL@R:@-MX^\*Q5172+P\$02\*149ITV(0>W77+&-P^V^CI>1f)1^IOHK&&7UULF[6  
M191LT^=M2M>M46^B22AN!>17XB^"PIN)Q)WF#@<E9&)+0P^OZ^"DN5XDFY M;+Q;)G?;\$5>3E,WZ>BO-S@8#@<F^Q^XQX,\$L3>  
&NFGH>S0J3@f=VU@<\$@<M82D>04^YXGH!\*J^Q^717^KX+J9VZ@<^\$K#5MP882NLOO)IM#J3K^F6NW  
M^O/LD5#TS<^GSS#<G^9@K6D\$G^XHR)(TR^EG1U72^HRD@SC^US(A^S5^QCFZ.Z\$YDW13E)M.0>L4H47MVX;+9E%./#W:GK1G^BY)S!P  
M^@DBGPX.40<O^V1V2&Q6SR#C (M7Z5;^N^WV:6VK LN=5K^YJ7K D^G^UO M(\*9)2IB81N2D=+1YDY^/-^AN#V\_\$@D0\$5AG^5Z0CU4#B^);  
<^IMSVOXN-MNBS^T9L8L(TG(F8X/JEJDY9E#1,\*\$8%3M^19RLJF02F&F^6K(^(YKX8D\$D M^8>-5OR,W91/^62(RO^B)VK>M^+  
T>6D8^GLX4:0C)5^Y%;VEI50SR^LT M43N^L^+((PQ8R3#>N0A;PHP%5<)NP%#S3K:9T3O1^X^BLOXIV^X,Q^I0)H  
M-U45IK^"YUR9/8QTH^JT (N0W5JR.U^Y@.\$U(QM^GS-Q8)%=V\$QIEA^=,B^GP@<W3Y)6  
M^#YEZV=,CHHXJMBZ3(^(R!<4>#HT^%W5N0.U(BJB6YNUELH4Z MPN9NJ^5<45P^N590\$R^X(8RIGOCJ^M/M^?DU7,+PV LF^fT@RCVT?S-W  
7-301ND^T5^47Q)-9X 8XS 828JR86KS^A^HQTBA  
MWAXS^)\*<C\$Y^JT&+J6E1D^JDL^Y^CHYJL^D^J&MS^)\*R;)BLX-O7-OQ>;\$7^R4D(H5HLL)^%=59J#5THV^F@S^MV8K-#5NVKHQ^W^A5F5QV19:D^@%V^N  
MUCXR744\$J.94\$5F@BS;(^E\$&0F:J^YE^KKE3(HJ2<^\*W^C2J14\$5;%B2\$LS^=,H)J MY/0LD-W\$LBf,<7^YAC,E-6^294FC2&^Q,M^6/^I;<J-  
^,&F2^%JL3(D^U MHY>=O^Q^LHX^NB@BAD)T^TN^66\$D0K>3)AZLFIO S<  
MZY<+T^;MDYXMO^DHYHWM^PS;^2N@<#L9UR3^YU3^\*V,Y715(B4SA5^T<->)&  
MRF^A^E9JCGJ^RI^ER8G5G^Z,KR8JHB^\$2+L^RCP^B^D^N81@<#P^9)OWMF#^1^Q\$Z MO)3E<&1^N\$5TWC^>^/;@IR@J0H(^JB8#^"\$  
<4A^BCW%~LX^IGL^H^\*WUf+V6%ZJKGM4#)0<#D5A^NW9 8RJ\$=-N1121\$M^MVM1^SF>Z^O)3^%#P  
M^JW@+2HBQK4K8GK08VQ)+0^@3J40567^&P^\*D^RH17HDF^6FQI&4<Z12JE(K.7B^9FVFK,TXN9NDDN(^M23S@<@4C4Q5B  
MFZ.93K\$UX<^,Kf,+%&#M^23W^L2)AP2N4.G252%Q^N3J5(Z8P60NN+8>H@<^2%0^H(Q5-U^6VVRPXIZZE5+L,+&^A)9>8/  
73E,+&3^!<=7W2Z+J^+Q^Y0L8EC^"(M.C.YW)>>0%<X>;<#&V#0\$^1G7^OZWK6L)WOWT;B@V(fT^TI>3Q\$)M01(5&0^  
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M^YA^N^&1^\*K8JZA^E3YC)J^YL-U^9L6%")KNSME(RN^X(D^9^BFT9&49 M^@1TP2,<^Q5B-JR;&15 MJ&0BVT4T>=8^N3E3&  
(VZH6Y#^Z^Q^=-SQ;@Y46DA^\*TM+8)JZY^MFL^%63H)MH^SL8Y\$&T^@.6RH&,\$\$5&"W^9JT(BW;,&I84">F3B^8#(F56=IQKGJ023NP M.N0059+J^  
Y0Z2@<7B^Q^KU0G^K^G<&J^HXWAP:350^JZKN^\_YD#Z^N)^5 MTFK^/U7EJ MB#)H^%NO#^YJ3M^J^V3<G^%UK^S^9O^GT M9C)^TG^%  
(UK;S^9O^GT9C)^\*UC^f+>Y(Q&^Z^4(C@<=0H(QLBWJ^R)^2MHIDE04^LI(QU(J^JV^YVRU5G;L4EA@U@<=M^D)<8>7<5^K^<^XP82\$ED??  
EMG^Y96=ME2^\*NSJPV0Z^PR^%3.N66%VH)21^6E^CAW&S^= MJJOVY^2+J\$54DW.WCQ^C5Y91RDV1^6 0%<V^L^J&7^F57;8IVE.P\$+>M  
MH(@/4f.X6W^N^J^V^Y<=B^CAJW4H2f%TT=^J^JLX8^N^%6%3^#P^%JBV3 MIX86R+@B^)^43+V^#K^Q^QUBH^IE8;  
<^Z^@J4C1W^D08)\$@<^%XY8X;4>8f MO@QZAEBOKT^J>O^&V5(XPNFPDf^\*;<@<=^#)1UC^NUC^R^\*.WTRM3B  
MK0fE6HfY28A^T14Q44EU6R^RD7>CQ^\*G(8W947^R^51^A524IK^G25^H^\* M2.B1D<V^U^PDZ6^ZS8+U5\$QO^W9R9^5K>\*6K5=  
<4^W^"X^\*#<6^KC)R1VH;M<#Uf^\*G%HYV^UN^?7^H\$DFQ^)%^\_F3(??^"H8;^%VL1^)(@O^<2^J^Y^WP^M^XA5LZD)6MF72(JB^fTL)1-4G>=7)60@  
M(H\$SC(ZN<@BR^A^L(R>G01,2NLD^CMM^A^=BON5^RNV5^T&4M4K^&4NF M^H^V^%PCD740WKERZ \$U^/8M^PSEf+5P1^6Z0%VY^(-92N  
M^TL^JLX=^f^QXLU6IXV) 4Q?2^23IN^S^C^J5MB^A^J^J)J5D)V55=<49V4 M^EQ2<N>T^J0DVY^\$EDS^\*#J\$@<F^21Vf^fA@B)8^X^9>=WM^fJDLXGf=7%  
MHFS^Y)^+(<19^7Y5TY^(J&50.F@<6A^22@J^7f0BD.K5T2^4%^(f^TX,A^%BS^UN M&Q)^X.MO,\$>RH^9#C^\*S=U^/937(O^N8MQ^NVZJ  
M^DS726@<@V^/9DB^9HJ3DD\$9IT2\$S,3Q^Y621^%6%<4HE(^%K^J9PEUDC)ME(@J5P^ZJ2^)W+(\$UEGZIES@Qf^IP3^BJ#<3UV6US<  
MYVET\$C@7+@USP=D1CZP^/62(1G6^\*(NFJ^4ZZCP^\_5VBR M^B@R^JJA@20 MYBIVRJ^J1+&^4VQX^#K1%Y<^<VIT4\$=BB)4155%VC6=T^KJ%J^  
JK8> M252^5GL5B^fHVOT4G^GQM^R^S^QAN^J8SZME^W0MCAQ@^91PB4AN4)UB MJ.D+9RNJU8N^N^MR^fWL&  
M9P1E9\$9OR [QU7>Y891IW8S12X6RS-E(Kf=^>^V^2<^\$J^#@Q@<^K<6WD>M&=>2f^\*6+<6WM4="Q^VE2XPW1E)P2^BLCf;\$5JNZ2f^2  
S.WZAXL>O>T^fJ^ MEXSUT8?W^;f^HW^O^M^M^/Z;@Z;,>^">Z(&S; 3(33CO.7R L^ZM)W2^<Y^P^' JNCIG3 +AQ  
M7I4&SAVL4\$&J3.B9JK5HF(^\*KN\$>^K\$23^3<@&Y^M^\*@9@<8)1^N4A^F^+1M^T3O^%U&35ZL^5="D)MV^fANQ9^T033^BZ=DC%5W2  
MBCIOZ2G^NFQ)L\$33<2<^TAOG^>C@<^D^Y KTI^YCGJ^ MPGT^NX(4^FRVY^N0H1NPRH4^R8^N\$#(=^IRQ^E39P^P^J^K3(  
MVO>O@CPN0BPO^C^CMFUU^=A^P^WR6^N0D@W23DXQZ5JNVQ)YV^UY^5R20A MF8^6)W^95U^PDZ^ZY51^HJ&3^H#12-WR)943-  
DIV5RIEYM^LEHJE^fA.M^M\$CTU1H\$AE;G^\*5.LDLE^S^B5^F5.3^BU1^=)^%H#B4^U3P# 2&^\*=(PME^\*P^MXQZHE1^SZH^O^+8(NE M^fWJ^5A)HX%  
<0T1DRU0>.Q8^E(<6:T929&\*KBS,4>^/D11%<f^+RF3^ MY M.4J)(?^VE/ ^YX^!#?>Z1^QW5QFPMJ608>YV&\$4JP7^()\$P)!!!! M( X1G^">ZS?>UJ^"  
(J0TL^fJ>2GKHfT^fT@<3FBS^fMKU^H^fB4CQR^9 M^29N@LKPRLRD(C^W.8PICK7fG^MV^O^K6Y75R^1+5\$4^+D M\$4-E5.&^9M  
MS)^<^K0AHTIW^%0CXZBD@<@.5?LA^K6YMLU7?478E0\$4@<^%DN^JW^QT^EG+U4Q7K^PH^MR M^\*D6^\*I@<^5.W4,19%PNE,0fO^?V 7HfO^Y^YATY^  
C@<^\*^L8SVY^?P MHA3S^J03>>2,8-1AUQJ74@#J^>=^<^9CSU^f(06^G^Y3^=OHOVL^LCNBE\$G M^&O^H^87\$J@<PDJ^3^NG,14170,^> 4447A>J^IK-  
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H^K7Z^R L^ZM^7R L^ZM^QQR1^JGU^K^ MQX ^#CZM<Y?+^PJTfM>?S^X^C^2HfDY^0S^&UK^SQ^"O^GT9C^+YR M^7fO 5K&^V67X ZOX^?^  
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ENCY^Z2^&@<0Q=4H^J)POY^S<LV.GVQ^Y^MOLGP^A><^/P<^/P9A^AW2^HQ^AY^Z^Z^&@<0Q=4H^J)POY^S<LV.M.GVQ^Y^OLGP^A>  
<^/Q;4^0fE59^SS 8W#;@J^+W.7)6^3A^M^#L7UGF2^@0) M^\*SCA&J@K(RI^8@<^%A\$X%8O^AP^+EY,S &RW1^<^/P<^/P

begin 644 html 92764chart3.jpg M Jc X^02D9)1@<^f^0\$1(\$@<^# @<^Z(\$EM86=E(<E^F5R871E9^!B>2H^M;\*&D9&EN(\$=H^W.T9&RL^f^X MU-  
^f^FXIGA^3JYQOY01 M85K7R@NK^Y^B9M6&Y^M^\*9W\$DPK^96%LNFR^JE>CLG128<^E P  
MCQ^ZV^CE^9Y)CS40B<^J1DNML^J.N^))Y6f6SY^Pf&\$%B2(0P3DLC^)%17\$46 M^"W:17\$V^%5Y\$(OQJ^J75HJ(L^9N@EQ6^\*(AF^2  
&HfVI@<X3^\*M@<D4>XB)^&M\$M;RX^2NZZ.2%(A^fT87^K5A+^M1DB(L4J+M@<XH8^GG#f^f^>XY&I3D=0 M^YB69^fA^6<JJRRFOK^\*P1.N4\$E  
M7L7D8-9R\$L@43A7E)C3RR0>7 69(^K BB^29HR4O6M^<QI&7&6RQ^WM+@J^DCG^MUA^8-E^&TDYP<#06%<f^D)A)AQE B^WX7KXMT^Vf^P;  
(\*BR6ZLW^\*QFNJO^f^\* M6.URZ^C.TX189^K(26T9FPWJ IMEX8U^\*CNO^H^S9%W63^%AR2Kf7@<f^\$Z U  
M^5HJ8ZF+ZfXBJHJ^fW^fW5.F0&A^\*HDT5C<4E^<X1^fPGf^fL.KGf^fV= M2H3fH536A^,\$\$N^W^G15%<^f^fC0JR3^B3P^3B^6<^W@?XE^+&QH?^  
\$)#@<6F4W0+KH\$^fL:9602f\$2^\*2f^+W)UHECDY^4K<M^W^R50N<4D^+1(4^\*%<2^0L6K%<D11^9(E3E&J5)Q@<^2^2QFFC^"KTE7F.9 MfC-  
Q^Qf(Z2VH^Z^XVU^IK>OEULU9%<^>;>91^#1^::DMARISS^L9676G^9 MMP^7f11<69^?5DL28KJ^3^9JY^P^K#C-  
ZRf^fM^LQ@<^<C1GNBX^M6L5^<W^R^N0UL3& MS^fMW^?GYT^f(MO9VEJ37^fG^=2^F3^\*#RNL2^fZ7>XQ^f1^fDCUGXf^H&^ M^6Y=7^A@?^  
BL^L&EFE8^%<^&6\$C^A^/ B^M^J3U.N3E1FXQ3#D^I5%GP@H.M@D=&3J^=7E^IHUR>KZG.R\$5>^>7&C(^15Z0YL.P8&5E.3(YJOB)^&=YM2^  
ME\$QYP4DY@<^%<Q5>8214\$77^BN^#X^fDWO^K6^K<^Jf<^6OXUf^%&HL(^M^Q2^>Uf>S^W12  
Q^KJ B^C4@<RMROZY@XfD)C1W3\$GPGY^B&S^CNRXO^f^fH\$^fAII^fU6T)3^=">J\$V0AW MVYDWRNBE.R?  
EH&HA^7^\*OCYf^=f^QYD^W^L^+USS^H.7KHPXJfM^Y&R^Y)BHA^M^G^H(^G^NO^@JfT8D4U5G>H&@<^EV^A1W^D^A>2HH)S%&)^  
f&66QJ3RRN\$Z5U9UW^fQBL^>3 3 M(U^+Y^<3\$Z^BX^YR8<12>)&fB^&N^fEG(\$T%L19 Nf0RK\$7L^fNI^U^M^AUI>^TVZ^25f^U^U6PJK^f^<^  
G^EP^"GP(EK^&7^=CK^K9f25A3XZ.B^NQ)3 M^?JX(X.MNAZH)^ 6.T^R P^ZLNMNHTZ^+G3.3YfEY7&BY57E.^f(C%>15fE3 M^\*BN^AAOX^J^J=^  
fW^fUK^>^1^2QJB>^8 KQC^29AR2HX144B)-D0455fM2f1Q;QZ^= M00K^\*4ICBE"  
<^LLX@<@P^f)YH^+&G\$F\$F\$W^fL^fTL01E&^%<1-E0X@<^\$>K.E.1&57N^=^E\$@QS MQV9Q^+<^ZV7#<6LLWRW&L^fQ0K3^+VKH8^\*DB^  
N3.S683^SZ1^CL\$J^U1J MJ@M^XX.H(J8EA^9KH.R7(549A1R^NWXY09^Q1%<7.N7E1^\*1^B)NJR M42^??7=9PS^V82^fV^T+^;  
M70X^%0>))>QJ^9TUXfH-4WYNSP^)% A^OX^K^W^L^=^G.F9V2^+MT<^fU4R+JfC^#(UHY  
G>>D5L2L^"HMR)^UH=1^VJP^9.S.E\$3@#E^YU^\_.B^+T 1.&^&6^H M.W^4TQ^%("XT<^1@<E2JSP8ZMJY2\$AN;&IN.0^0U^fF=DW9.Q6=Q^2#B69/  
M4^9Q\$>^0<^GKXEX@N3KC.K^UP58^<ZQ^fC4H^Q.KHfZR^fE2^NBLHR^#<D6 M48^6WD^9K=5U)U>^BSB>^W^fK^\_15(VQ^BQf^fL  
fYD4Y^D<4#3^f^2 M635^9 76fQFXf60PX^Q18^fV G^fX D>^5>^fELWCN9fYK7^\*0B^GLN30+3(Z6QNX^Y6Q7E1^S^1>^V(BfEQ^fY)54TR  
M5&9&M^W^LXW7SMJREK=DS^<^Y26fR9BA=63(JJ2M^1RTL5K^MV>XTQ21fLTSV8^W>8L9J1.Q1 T^?5(O36+^>E)^Q^fA0D^1A3<<f(SJ>E>G  
M7\$HVA^8OZ^>fJAW.BU^2&LJLLOXU^f^Q^NAD1^?2^4KPK^U1^%5&4^K^f^fCB^f45AAOT^=O8^f2fD>^fCT=4#>^J^K/>^D7M^? ML5J^Q)2  
&^fJH85^N3ES^2.L5Qf)NA.PV5 M3^B4ZF4Y^9SVU^fWUA<0J^O^?00GG@>#<K^\$W^"A^fPE.ME)f^A^f^+P>4  
Mf^Q51GF9Sf4 22Q+P^Z=^E0%7^%Z^&N+1^%P4CZ^Y5.K1)>X>S8fVWTZ7B<2@SBF7(^23^)&=NQ52UF MWJ6J65 +1F+^%F0?^  
N6^H@<R^2^ZX2.A)Y^5LXZfTBH8^V1X^\*GC\$D6YCD^W M^TXRL^f0&9BVCfY+17^OX@<UJYU^+3@fWfHB^SHHHHHHT^\*\*\*&BBBBBCHHHHH  
MHT^\*\*\*&BBBN(AV#;C^?C^fUKBOYUK60>^"W3?R^+=^BC1KE17^PPWX<^=T M^>CFBMPX<^A=PM^fW^U^A^QN^W^W^2^+G>



MM4%\$2%\$E0RHY2K5JU`RB\$J9-4`HZ@`TLDDL(C#IA`&XK1#`T6P2`?)`J:Z MN^%\$Q2EV@`F.R2C.C`7EO>2VJ+N)1R?`""5.K`J4DDK`RHJ`  
(K972) `O6G`" MIOJ`"BBRS\$P1:KGG6V16SD8:X7Cw&4-4RK9`F9?`DC6021`X Z`1+`Uf46Y\$D`M\*\$`-MI.G`P20,61(8WQ2W2H9@`28N%619&  
MT\*)`38LTHL{N:0!N3BG`H/LG2%\*A1`7JYPR`2AFC&`3\*)`0!`QSAU45CT`M`9>`4F`4L(CPFX)4UB4N!Q!61%DVDZO`S.TF8.M.HRC`#`  
(=,\$`ED`\*OL&Z`\$J.M`JYN3AG`+>5,WXDY`7!N9-D,SXIQEL!`JY`EG`C/EF00Q(F4)MC&82(K>`/G`M`Yf@`&1HR`+!`  
(\$!\$0f`\$J7`F(Y`\*6,1B1L`S>`"VYAS\$@P3F15&MHLN910Q7EJL`M`XCA`4E,1W`-8Y2G4Y\*`MHE`C3HQJF3E7,LN7#DB0C!`WCU?7(P7LES!`SV9  
M\$EE28`5U9.MPVFAV`FJ:J`@`DUUQ6MWE%`JY&V9@MXYGQ/BQ`{8JEC`+JX8?`DU M3`G`ODF`!ICU`" K.W`786/XUD`^5H`=-`%:E`"G<\$8VAM<7`")S2  
T0N`"KK MM.G`+`C`IFKD)XJDI`H8G.6Q279N7Q25QJY`9`HJG,ZH8ZYRMC4EKW>`%LJX MMF`"E19`LR271`+4.8S/+F09/K`CFEFA>  
(IX`L`+>`R`!Y?9V2IS\$S9`-RMBV\$A94D`\*`#X.8Y.O2`&L,IC.9UMQBSL`MTXONNQ`\$B1H5!4EV`/Z`+D`Z`RA`..X&+Y`G4.Y!`L2UU5`G4/>`-G`+<`)"`  
M4X`ZFR.&UDD8N`-B`-A&4%#`M`>L.N`<`ZSDT9RN`V`E9OHN1Y`Y`Ww!`(!`#J!`C`G.M@K`.\*Y\$C`^FD`+Y`\*`RR)B`\*DL`-T`7.K(H2)4LJ1N27`A8  
MDZU`<`JRM75`-(C3:6%L`1`+`0Y?CM7BDUC2%`MP1`##>`1BLPBT`8@`D`V`OQ(E&Z`J84!`\*`KMD`+7GPwT`48W257CYHAF`+D  
M0`+N`\*`TS&C`EZE`(@RFBX`<5<+H`N\*)`OG`+6.Q`S7.79T(IC1)5!`HN7`+B#`M@4`RB1H`S)HGJ\$5`V8LW8SB`\*`&`JYW@>3W`+8UQ  
MWR9SS`RYOS!@`Y`Y`YN`P`>RPZSU,E@`IT`<`")`\$WK`W`C.G`3`+8 MR1`6G\$H!`68Q`E56C2`-OQ!MM7L.8HEF`X`%`%`%D40`M\$`JL`  
H&S0!J217`G`)\*\$K!)DUB1&Q@`Q!B3EG.1ZD!`5S`H`+`%`@YN`8ET M(TP6ZHW`S`O>`.(2)MT`D`+>`&MJ4`RJ`+3\$Q&`1L`NY`U`L`FMRLW`("1`  
MPYQ`+2I4`9\$ALE1D@`@MOD`+M`\*,ZRAMJF`C>4RU42`Q`Q`&`+U@`4DJ3,CX`04`M?`+VT`9NHP5`M`R`"!.DLP\$BY?`\$KJN76LTTJNF5`!1D:8YA!P!`\*8?#  
(#9?T`MC(EHL`>`WCGJQ`G22QNC`N`IMDU`>`RR`O`(\*ZINFC2)3E`\$XN3\$T`%`66G`/M`JZL8`>5AG`ODIECHD`+L\$EJFC`W`..`  
f>L`!U8`Q`HCP`D9`=H`L9Q`Q`="`#03!`J60!`#H!`FA`M`\*`\$DP36VD`R`S`G`S)Z(H!P)3R`S`+`%`f5G`U`LY7\$`LMLY`-WG6699`G66%50  
M5EM6UV9N2`NTD40N2`>2&N(N`+9W5LUR`5`A26V`\*`+`..BL`\$P345`R`C\$`\$Z` MHPIS`+`<`M@16VVGJ3\$SKU`U`W`U`C`AY`93EUF`R128`M3`L(BZLU`  
<`VHW`&`).89`-4F3THK`N0`E8JBG`<`<91CH`IV`#`<`))E)DJ`-<`P`%4F`-(D`\*B`+`RW`f(R`V`Z0E5`5OZUW6)`8C3!HT!RX`%`&`&M`<`8G3`F`&`%`C`>`  
`#`-`V92>`9)YQ8VQOQC`+PFQ`LR2AKZC`VN>JHZ`%IEY3`MIQ6SF97`CXOEE3`Q>ZC2)4STBXAX`R`OR`\*`\$QVRR23&ET`3RJ`-B`-8TRS`QZ  
MIG`QY3KJ9&`%`6IUQUN`XY8`@`E5LEVL`<`")LGNJR`Q2&`LRX`&`@DV`N@`IEE`\*`@`  
MLMYAINEE9`+PVL`%`L`Y`G`D322H3`6f`!`%3`+`%`ZG`\*`&`QJ.M9`>RGC`(-`I`-`A`M9HGKQD`J5`..KDZ`#3S`f)Y`C&X`!`KDG3JA`  
UKA9IC22H4Y`A`"OH3K60`M`-5X`A`A`\$`A`W`-J@5`<`-NWJ`T`..PGDN0W`823998`Y`+`Z`+`1\$`#FN`\$O`"@9PBU`M`\$W`\*DC?U`HJQ91@`K7N9?`  
IMD`<0NT7B`98CF`+QL8DQF(N`-1J17`&8J5IN9`MGPRO`!)R1`+`PMM`\*`JQ!B!\$OF2`-N5F4Q6`J`O`Q`UJL2G5`+OFG`UC.1CDH`MDF8`NH`  
`=Q9B`\*FF`K`f(E5`BH6R`%`>WOLL>`..M`7E2C`J`+`4`E88557)J8X2U0M`M3MSB8B7KU4MPH`MB&QOD4D9SL`@`FM`H\$K3`3BIO`D0GH3`\*FFIVQZ!`\$`  
<1QJ2`>`"6L68`M`MPOA`Z9GX@`Q2!`"R`%`(\$TF8(36Z`D`fZC`\$3\$D7K\$K`20E`\$`U`H\$Z5`G2DD`M(R`>`D`V`L4M6`J\$G/N`..?`+N!&`&`&`&N`9)R`&`#`M(E`+`  
<`M`JFJGVX24)C`+F7Y`M3.2.O9`UDEP5YE`1`MJ&`@`J`F`BU45(J9CC`fH5G8YU6V`+`\$Z9`<`MY`YINQ`L`8ME`3`>YCD`>8W?`)\*T4!`=-`S58E`..?`  
(DAFR`IOE29H4`@`"6G`M`2\$1)29PZHD`BPL`0AN`JTB`YD`>f`S`J)G`MPW`X83BUGP`DW`-2!`MO\$N`D`I`AVUG`S`@`PK4!`  
B`%`=-`R`>`%`K(F`E`S!7`>G`(\$8E&4)`Q37D`..\$9V`-`MXYL`MUA`8`"09%RC&`@`>6P`+`F`<`-J`-`G`8HNDI`Z`RF`MS445`&Y4@0NR`%`  
MM`3SP`!)LQV`%B)ZOR`<3C`%\$SAUQG(KVfZQ1`E6`M`9@&`?O!9`+8`KD7#`-?J51G@`S1\$4K6!`DTHP9@`+`\*`8!`+TIC2`+>9166J64Y`  
M3`-8@H@`"BHIZ`JTB8`-05`?`C`M`J`ZQ`H`-`P`>6Z`%ZQ9`R`J`VY`%GRG)D7YVR&XTXG`B`&`).1QIA`C`<6R!`M`H`@I8RE`  
fN25&`>PWY@`R`fHZN`H98BV&N3QW9G`QLSY6V(VMVDDQQCC`>`#G`M`fA`@`Q`\*`HWD`>7C`+86K4#`&4(2@`f`"F`M`-1`>f`-92PKK(C3&`!`DA`f`  
(Y2`-L5DKB!\$Z`K`7)`TV`/2QU`N4`-K01`MI`UY`..+`..J\$26`L7A&A`G6`R`+`@`<KGBI`+Y2?`W`P!`&`>D)G`%`Y`/`AV`  
MW1H!`J3`QNKH\$TX`+`@Z`K`WKU85`D)R@05)C!SM&`<`\$M`OF`4N4W35VW`%`9`..MVQ`AU`%`-NJQD`0KPTMVJY1488SZ`<`<1JBRKRf`  
(L`B`\*S7P8C6,5`+`CB55T`M8#`2(48HRE`fQ86YC`>`G`K`#`!`J`8`%`X!`YHQAC`C(E@`XA`NN`%`>GZW4F`>MA`  
MIX`+F&RC`+MSLV\$9&`C7`X3`+6&`fTV`459`HQB`59?`P\$B2`-"0`JDE2@`I3Q90U`M`>`HAY`&1`V`&S`  
Z)G)3`\*`XIB(M`ORR`<GDNRE`+6\$8@`J#O4`MG`-NV3`M9\$Q&Y9P7`2`>`+`D`A&8QfPKUY`#A`#`X\$`..J`\*4`D`("8TPYMX`fM9!PQ5CT`>  
M9`X`%`%`KHf!`#S`"-2Y#?`@A\$EFAWDEWHDMRNJL98CO2`PN`-`%`J`M`fM429fC`+`..C`S9!`-YXVL`@`SC`#`  
(.64MT(5`+8L6D`HBEST`-AN6f(C`5CN.1`+>YfKNY5`+CL)C`%P`M2/PHR`+f`5`K`>`>RUC`%1CO\$)`(CAJ1ELTHXA`C`>V15`<`J5ED`<`<3`J`H`?`  
X8PY`W(D`HPT7\$`HICK`"O`>XKWf`X?MK`M`BGF9MU`REA`f`+`8W@4`Q2C`\$8TB`\*2Z&`\*X`B`..A`17N\$8DK`%`#6`&QM1(Q!`"  
MP\$0(D!\$A!RW`ZH`2`ETYP`..7J9`\$`S`J2E`+`5`WAUS!R`BUQ4R`KB`>5Mf`MA2?)N`\*`\*RB`@4&SX`-YW`BQ.024CX`P`VSRGZE.39`f6P3XfL2GH(KQ)5Z`8`  
M8G`-HZS`UK`A(KWKSD`\*ENO>N`FEU`7%`W9J)B`8`Z`1`IOT5`TL`..3(5`  
MGDNV`@`JL9D`W&F`82(fNOE5U`"XKVA8JPG7AC1K(K`"M`JH04I55`M5fCEP9W`%`8W`+E4Q`A`1`\*)LCL)KS9NA\$J`<3QVTR`  
M`V`-1H`%`7GUKZF0U`#8YVTD3`(-`76`!\$BN6`\$X`\*`CY@`KBC)AQ&FQ5!5Q`+`+8A`M`NN`\*5?`G`V7D`8SY5Y`-E9`SK`>QMf`  
<(K6Z`f`!`887`+`X`R`6P`%\$`S`1`\*`ME122`TOC!QG?!)Y4MV2JRVQ`..K`7`GA&E`>CZL9`-`H`+YXKB`MTX9AL7D`\*f?`  
f`P`f`A&U`-Yf`8`UQ4E&`..9`Z`-`0ZL7`\*`9GQ!G`0W`f`F9Qf2!`0ZXKYH`MF`48FR9`f`"2`\*`P2`15R`20BD`U`&?`  
%`@`LSLF`G1U`>)6A7\$M`#6H`S`>V`+0N`0DF`M2.5)DSB`+A8f)QNW2SM`+`<Q`9`\*9`-P\$&6`O`#BS.XNJ`fLFFUU`QVLH`FE9W`  
M7C6&U8`@`EC`..7`-TU&`G`38!`..8QTS&`9(N0AM`%`C)GYZS`!`[`\$AM`RGY`TIG`C`M`Z`#A&A`Q`2`BIMIN4UOIGS`\$`5F0Y`@`UG`".RILf`2`  
2RV`M`B3L`O`SS9`#E`O`ABB`..N1`ZNR`+`%`%`6\$G`3MFH`RM`M`"(0`45D`0QU`X5`%`DU3`+UD`R4`D`\*LZH6A2H5J4`E`"B`+`&M`<`%`DY6@0N`#`-`  
MAS&`R`)\*`ET`U`+H65XAXG6PXEY`57T)E`ZJE`>C5f`AVU`/4!`<`-?I`Q4!`>`!SSCC7`f&`<`MIA&Y`C`N`L`O!T`>CL`MDTXV8`\*`FKH2S4\$5`+`3%`P`A3?`  
ZC`"VYD`<`<090D`SOC3`#6`M`C`XBR\$`fB`>f`F`f`%`&`O`+Q65`\$29TfQZ)L9W\$`Q2W(DAQJ`-G`28`ER`7`\*`M`SHEN`X`+K`K`f`B92E`66Z`\*`  
f9SJ`C3S`8f`C`AN773E`UE`R275MTAG(BK\$J0`MMD33`+`M`N5\$!@`A2`REX3DZ`+EVO`Q`G`3`DV`E`#8C`R`1`&V`>VK`E`#78KG`>0`  
M2LUN4!`f%`QOL`+`\*FL\$B`WY`<`fY8MM0MC&`N`20`3VG`QO`#6`UM`MG`BN4KBOKBfE`ABE7W`>N`JUDNE`BP5`%`L`LQ`N`<`#9EGTW`fTEMA(D`2`  
H`JH2DLYZ`+`#YIX`1R0ZX`MZL81`>DZ`MAM9RRE`UH4`AKV@`"XA4@2K0VLDN`9@1J`Q`R6`+6O`V`%HG`V`%IK`H`S9`7`MYP1`+`  
<7`RIK#`>Z`Y9`1`\*`WQfBLE\$M`fYZAGfZKCR5!4FB`..fTOH`<3`"1`..ZH`8`MMM`O`D`!`\*`2`&`8RSEM`L`K`CC`..G`#1`GEHfKLHHRGWL7`f6`8!`T4`  
MFZN`%`+20`G`H7`f8R`f6Z`f`>fT)PZ`N`>`#C`Q`RF2`B5`+DNX3Y7`ML`RD`Z`fJU`G`>L`fGOOX`C`+`+ADV&2`-fL\$`..DK4`f`T`"1`"HJ6`C`  
M1`G`YG5`%DZAV3!HMM`+`+24C`?WE`\*MY5U5V7`-f?`99A&8`H9F`/83CVXD6RF`MS1MR/GT`  
RP`fT`LEA#4`YSMfJ@`3R80X1!`..3JHM`K6`\*!`ZM21`X`>`+`#`T96`MXNV`4VYV35`X`EC`U55`NY648C`J`fVRRN`AKD8Y`fZHL`f5Y57`1W\$`\$`  
MA`\*G`B`>#5200`D59`4`+`>`/9?`>E`A)J!N`\$`\*`>V`^`+`%`JP0TfRQ`QZ(S!`-MQ)HfC!\$7VE`U2`K09XVXWMXfK!Q`R`/G`fCVZ`\*`6`B`..(MQfRF6`f`4B`  
M`GT`YXUROQYM5CYK`-W5R`<4T`E1`>0XSFF`R`\$Y`2ZAE72U`G7f8JE`-`9`fIMZ`>UK`fUCD`B`ZJ`MQV`f)Bf`JIS`V0`\*DP39`L\$`<`\$YMA`fSG3`  
<)ULE15`R`U0(6Z`BLH1775`G`C)CRDRBZ5082`<60H`46?`..<`H8`C!\$E`P`C`M`N29`<)G4Q`&E!`-3O`PMQYfEYX`+`<J`3KWTW`GXGQ`YJ`&F`T4`  
MO`K`MY`V`O`K2M`>`S`MJWDf8R`M`WUf`HT`812XG`f7W`-F0`W5WY2`>V`  
MB`@`Q4N`7457f1`A1)20W&`A`Q`fH`WKU7UQ`>6Xf`fHUR`92142`X`Y`"0`<87`fKVL`C`J`MJXW3?`-`fMJ07VfG`V`-N4N7GY2Y`EYfEY`>2`  
EYO`S`=-`V`^`W`2Y`BH`+`M0)BGO5Z`0P6`H7AA1`-D`0QY\$ARK`LP`#`<5!`-f8`BUfR`E`?`#G497B`%9)3`MM9UP50QR`&@4B0V`..X0`X`-5`+B`7K`-5K2`\*%`  
fERDRY01)2`fJ5BW5`f71(E3`ME88`\$0`<`<`60B`0`-MH`NC`<C`%`-P2F2(UK(M1)S`"KJ!`"89`B0!`+`+`\$7882A`+`61&`>8`M`%117&U`U7`  
Rf`%`..5HQfVf&QM`ZCK`-9R4RX`Df`<`<6N`Z`+`fT@2`F`@SR2`fMG`-f72MN`-G`2K`M(R2WK`-&2`fEEMGUY`8UF`-D7ZXXfH`C`2715`J8XfL`D`#f`  
-fP15M`NC`%`+`+?`fMOELB`RV\$MfT1`93H`\$EL`91`U`>3`Af8`fGNUC`\$`<`fGH`G`+`L`%0P`?`<`fHU`@`M`@`#`>D8Tf1130f4MH9X2U35`f\$B2IX`G9VA`BC`?`  
`D`%`PD`9`>`%`G`24EPEN`>PFf`MK5TfH2`U`+GAI`G2X`<`3`!`>`AG`+`2HD`@BQ)2`9`+`#8`2BfIS`E`M2`f0BIC443U`%R@`\$`-f(f`-5`..(6L`fJERH8`G`&CL`  
f@`H@`2`HGO4`"MO`>f9`<`%`&f41`<25GN`3f`+`fT`\$TDMID`-`%OKG`?DN`>f7`-M`S1D2`+3SfR3X`fYfN0`  
Mf`fE`K57f"\$4JL`7EMYAVP`WWR7`85E\$`8W`\$N`9)N6O9M`8VPLN`\$)`\$A`-4N`ML7YARA`QN`>Yf`fYD02EE`?Q`..212Rf`  
fV`\*M3T`6D`L`..N`-2EFG`+`#9GFX`M&`L5X`fVZC`+`fE`L`>B`\*`SC`H`VITE`f9M`-J`32f`R42E3`KD`3VWZf9`S`fMPC3\$`+U`?`VDG`\*ID(P`%8f`  
(3W50`Hf@f0&3`>P21P`ZE2fJ`4`Y`M`-3G`>`(\$W`M5`8fJf`+K&E`>S`J4R6Y`f`HD2IS`>G`E`fNOJfT`>)SfQ`A`f\$FX6QDV5`fHF`  
MX`2`>J`MfKBF`&446`>Z9Y`SXU`Y`<`>`ALT`>90Z`48E`fHBR`ZQf06QLYfM`MT`R5D2OKL`XK4`N`>N`>O`C0`G`PEM17`8G`W`\$V\$1`)\*ZRO`RJ`M`>IAY`  
\*EU0W`\$SWPW`N2W`f`(\*92Q4MTEY`")J`O\$7C`+`\$ES`BYURXZYX7L`M`#`-LE8f@2W`4S3G1P33?`2H)H`\$)36J53.3#2@1H5`%CF`E`>`-S5&`7`>`%`2`  
M`TTW`Q`E`#fOP6`\*)JAB`fOGC`?`Z`"fJH&R\$F1`16`GAYW`EXfD`fQ`T`O`M`%Y3`..W`-V5\$`#DK&f3R`>687R`3`\*S3`7&GS`92`  
\*%`2`<`<fN4Z`#`AN\$`f\$SL8C`M7JY`6`-Y93&f1fDfGVf&M42E(fANUCD`\*92`XE`>`%3&`\$S`WBOX`-P`MX`E`R8PY`%`f)`-13FB\$S`-SLZB`<91&B&9`-`#&94Xf?`  
GL2U`f@`fA6`Y`-1`\*C`N`M`RYWR`K`\$`"V`D0f`\$`G`S\$X4D`-5LB45`fH`T`>7O!`0`NA\$1G`..5ZFE`fK`?`DE`YJL`fN0B&J`+`DF2LQ`4H!`-f?YTD`"90M`  
<`>`&`A`XNBE`G`f`\*8O`FD\$Y`Mf`fWZK`-5N3W5N`\*3`D24`R`<`@2A9JGKHfE`("K4%`\$fSGfEE6`4J3R4Yf`-Q`<1`  
MXfTLDH(S3`-\$J0V7Xf`f@R`R`")XWf`E7U`#`H`\*`("2Y\$W0CY`>f0YU`5Yf`6AY`  
M9U`-M`+A`U`%0U4`..UL6(f81fQ`>6V`Q`f`+D54`<`4`&HW6Y04F7`+`"`\*%209R35`f712414B4`f5B81A`C`f4)5`f)`J`-23`<5C`M2`fRS`3@`..f`-`  
A)KSNLN`\$K`BY25`K`&@5C0`+`@M4!`%`D`XHLHXQ`fJ`3`<`TRHf`MfO`@fQfBSP`%fEC\$79`@`+B5`fTfN`R`3S`YK7N4DW`f14Y`?QW3MC`+SZTK7O`-`  
JA&9`<`"f`I`QXAZ`M`D`A3!`263`"41#`WY3U`<3O\$9f(\$X`>`fPRMQ`%PW6fJKfF`+`9`D`\$E\$7`<`#7`M&GO0B9QC`<B6082`f)H`#9U&`&"91`-H`f`C`?`  
(\$&E`C`#PD`?)2fJ0IG`J7`%`Mf\$1H`fBCP6`\*`+`Y`Yf123`-f`MSG`2W4Z`f8`-`W`>LCCJWKfTM9Xf5S!`+R`%B`M`U`G`H`>MXfUEB`+J`+W`&f`  
f0AULWA`G`YfMW`%`C`>MW`\$f`O`K`<0WYM`<`6O`C85N`%f`<`>B`1`fHT`8C12f`MKWCf8T`>M`\*UZ`-fHZVQ`  
M`>MGC3QZTK`7K`VCHAAQ`fA`Y`fD`1`..Z\$P1`-RFS`#`9`+`8B`RP&06E164`@`-VG`fA6E`fB`%`3%SGP`WDO?`7N`0K`0`OQX`MB`%2`  
Q5QO`>L20R`XY`<9`f5HC\$`f0EHL`<#E54Y?`-f(\$`\*G`OD`76PTUC61`<`O`MLXLEfNP9B`-X`JM`3`+2D@`0`<5W94823`-fXFBfTf7`<\$52`fLH`+`f@`N`)-D0B`  
M9ZEYAE4fT`Q!NU`"E65C`fBT`-7Hf`764@`4`..fTSL`SN`+6`fRBfH`fDQ`L9`3VU`f`&`<K`W`N`9`"SM`BCY`\*67`\*)T`+`M`<4KF`E`"Q`N`+L`>



[illegible]



GMIH9G/N17 -#>9>T>\*Z/VYL?M\$UO(???W&WJFJ5G:ODHV?=%#%59BW8^ MLWJP L2YUF:Q47^#0 Q=^C:16?SWY7%/VP@ &M@5!-5?-L? BIQ&POBQ J1S2J(QBQFVATJ1J2J)HLD?677&XS MS-VZBT^+36WT,\*1(A&1-ITTD&#S9HJ1M\*B:~PBJJ Z5UFO@ DA72@8 M-P#\$4>#^0 Q=^C-16%45%Y8C9f:&9 :J5 S>9>TM>\*Z/VYL?M\$UFO@M DA72@8 P#\$5D<5ECL[N]D2SO^U&Z50-Q)3B+8974^+ G%N[XM]JGCQGOQ/CMQ&QW^)&4TJ)5YA^FOK(5BXU^b-4M7(-MEM\$5 MS\$GGG%3R4&^IH0;%JGP5S^T/HZ:O^YET^5S^T/H/ MZ:O? YE\*KHIHOEG^T^f:6:2-5S^3S?2=-19^ZL[GMPV7P8P3^BWT^ZZ:1% MRN^RX/J8:QQEQGM8(AW^BS^KWUG+JB UK^Q6R/R K5fE>Y^D5 N\*9! 6NLYYR(JRHQ0\$825M41%<1USD5?)S\*OEUK MT/KM^<^7&7)L8XE9f+RFB@,f[B80)% C5># K&RK#?B8CU/2UTDB"9S MF>F,Y^D@B]JZ, U4445<10MK8O<1)5BX^SL6 MB1MYU,K2Y6G^E,473(DUKVNIH5J1%-13\$60 ICQEE^N]JU[MI>?9(S\$AS9MGY M\*8FQ%+BI+D?^V<X9CF)AELR#7M>G>(7K6YLEH3"YE)3(MF>F^V^B+P MXMf-TJZ^-0BOL#R12W(H^fK^BYPGI^T.BES\$F\$H^H^W\$%)JX1^D@RU03K M)^7)NE,? 8SFW&^RP16UNJ\$-8WQSGO5#8-)HUA^GYSIDQOQI.HHMOG^M^M4V8U-MC^7S9H^FS^DMD^R^C59^ON@D-E-PC5GJt0D1B9("f3^1,J>H^Kf M/#+GJ, VRBS9U^S#~92HD.RCLXKGEA85\*P(W^WALMC.G16%DV2\$>1-1VXM M^M^F7,==&?XMN?)R9!^YQE7\$9 MN4JAL@XXR93JMH JG0VZM-4P9f1-01O MNL\$DL5:ZT29>#TMR-R6f8fC5YfO( MO^T9^OXJ-7HJH^M^L:WLSYfOBW^Mf06 BIU0ZR? YVf- ZBVGf"?UO3Y^U^RfJTFJS^A( # RA)BUK2?0- G3XB 742>MW6G9^3O?Vf NTUP- 8C?L8 Z-Z7 M-HS^N \*!>^R(f1.N%~. 8C?L8 Z- Z7 HS^N \*!>^R(f1.N%6#ZUC5RLA?M^?f>1?TG^A&INR%6Kf) MY% 2JSJRI^YJ^K^M35@J9QCfY&??L[21PX827:6 -%H^MM^SfF?L)? OH^<6QCC@-S) DWMYz,BTHJDf)8SQXNB\$ R^VGMQ>U23MfJ3MR> B^M^Y^AZT^TO^JMHX?&Sf54 P10952^3W05f)YDf6GVEX55M^XQ6? M:JG^HfI,NOSM^J=-@fFNf2YfW^8 ->)JL(B^P^W^+5RKBX@/-^A) MBUMf #VM=8%I^9TSf)@f. f4Z7K3fI- HfYE-3J82H-^TSA^VOZ>9FW4 ^6\$Jf)WfM^VYLF^OQK BGS^3YH\$2U>QWfJP -HHHHH-HNBBCBQ1+W^U ^\$&K3? M^N^DX4X E- CC"?UO!fQ4G^O,fVNOID.\*OU:@?@ 3ZUOHAOTW\$ -#7^ M^XMCJ K1 M111HT4444-8Y+Wy %Hk)),L0.#JDCS^JfJEL4EUfEXIV=L5,ZfN0AZ5J Mf84F&FfH+?2\*DPHGfY ^N^Hf+6W^SfN^5YfH="4QG:R(9E>KfM"-GfGY ME^P2A-H2^1).A:UFf603<9%3>(\*1HG- P^8^NfL^XJXG^RfUfQfIAN4W.RE.M.<Xf1>9 \$L NND^O)7Uf\*1VDN4GBR01UfO M^N3:f HPJR65)Y^1).A:CfN^Q^99@9f1^2MfTfAP:>7:7=-(QVfOJG M(G^BA:850QNG7<@XWV4\$Y>T3.98+LZ(TfA31)MYfGI<4B-BP^XAMG^8X; MH^2Y\$9f(EGXK^V42X^4-1)8Mf)WLSYfOBWf06 BIU-AfE)fY4Zf1X2 MSQfJZf1GHfH2VLf)+&N ML^X75-&#EQ2)OF5M^+C^JTGB)2HB M^PJ+MOM HWV T:JJU^A^X47Q OW(Q^M7+R@7Hf>Y5f>IABWH0 FT-3YfM^O0A -JN)0Uf1\$3Y+:-R(GSB^QM^O^W?W^5Z:Uf% O^N^X^W? W5:Z?(%Z M\$7N4=-D^f)^+W^M^U,D6f)^VCJ82(MZ\$YM<f)^MMf@^OF 7AfO(fCfTf MJf> >f< P^N N:K8RVOWA^0^Yf)OW(Q^P? 4JRMNQYf)907F^BWH0 FUSJ4M MO9fX\$?(\*JfI^8 -^7Q X+X+^%TNGXUM^OU:GY^HSRfE P^C^RfH^YOSf M\$ZX5(329JY600DfHO? ^Yf% MV+70VfW^A:HfZ?(%Z\$7N5>X:ZfI O^EK^S: DUQZfR+>A^#4...79:7C M^9EZ?2Y 4:OJf%Wf8f,2E^Z8fXfXfZ8^WS26Hf)+P^U^3f>H?/L^\*(777B^Y MTfHKNX3G^U>3f<@MfRf) @K(Wf)NG=JK73Y O0BfRCHf7Hf>Y5f>IABWH0 M FT-3YfY^O0A -JG2f>B^WfVGP75Z^Uf% O^N^X^W? W5:Z?(%Z M\$7N5G^N^?f^&-%f{f5-FUf)^E3>3fIMZfR+>A^#7f8 K7XVM^8 O8M: MfIPZf\$2X^G&+YGDfM+7TMVfT:7>D P^PSP=-^AX7Z0Y? @ /NOXfXfJfRfWX MfENL>5D^A,9Z^XfR=4%#GZ Rf(=-TDWf?3NW3UN 7^EL9X^71^?Y f>3VXfM^M:9:2Yf>+HAAf)Of)<6GM3UUK>JGY? Qf6DGF0f):2A56TMM^PJ^K@-FL^&^ARHG/T "8fT2J8=-JMN9^KL^Mf7EY2f1-O9Vf2550<8fH^2fJfR^R^24KET^0+TfO^B@CIEM^Df1\$<5? 6f\$ 3AfO(fMfJf)ZB WC MWA^>fYJK73Y^O0BfRCHf7Hf>Y5f>IABWH0 FT-3YfY^O0A -KGYGHOM MfH5WZV=-FCf1?QfG^f)Wf\$5:6KGWZ G0^YfUf2f(WOwT\$2Kf6fGfWf MEf>^8TR>A^#7fJfJfGw@fJfLR^N7^321Zf8fT8^UO\$OB:P3P^QT^GXVM^ MOU^K\$-SR3+HfJf0f=3J2\$N4f)85fO M^AfG P^WfXf)JfO:L>?2YfUf1OE^?2f%0:58?) P^f7ZKR6fGw^fJf2fTEZPR M>VO>^N^KW UA^V+Y5fVM^?L^Q: LVO7fJ8?(MZ\$YfMM0^XfIe)> >:QLPfJf8UX^CfB7fEGQOS^3;^9X5X^X K7J^5:Zf@Q9TG:JfFW+8f=-,(@^N^KfW^VfM=-D^f)^+W^M^GRf>A% fE6EZFfR>A^#4fUfD6f)^VfZf9Zf1f:25?^O^W^2W^\*Hf 47 M^>Y @/- Y69P^U f^& ^#O^fI^KVAFU3EUfD6f)^VOV MP^VZ:6M ^&WL6M6X^OMO@^A?MHfE>#f104^KX R:HO2R^\$K(?8fS^G)U6R^FZ-RfHG?MT4WVf^f=-6f Mf)8RY8fYfW^P4CX^8f7fH69f1f4fJf M^VZfAM> ^U^U (KfYEOJf3W^K\$XfMf@fIKBfQ&RKB^2%)RC^1fJ\$SQ^f^&Q M2^T(\$C:35RB\$LCF2)U5/P5G93Y5>7F6OGCOZ^WB^BCD?%"TXAY)03LC M:HVGfJfOJ:N5\$G>(^JL2^Jf2X+Q^\$U3Y3<-RfA^G>^?TR MfJWXKW ^R>P^VW^Q^T)^?2^W^Mf6^fN7Z^LR+T ^1\*DOO96PKR?C^1 M 62^3fTN3(Z)GB774MKNA5-Jf8Z0NfY^SD:PHE058X@PLXfJXRPfH8fAXA M%:J75YEOJf3W^Y6M^WfLGMfA^V^F^f7\$S;f#B>3J%+9TZU98H -Bf8K& M7PCPQ^BLfE96^f1^"KU\$+D^H^OD+V^N^Q^8 19SfVfSFESf R:7XfXfQXf f6U^MT^RQ^N^X^6+D0\$>X^X^JfD6f1^4)A^N^X^B M-%%3fEU -1111HT4444- M5WV5UDQKM?67&F7fRfRQVAF\$%Y^#f60N\$- <@fCfJ-QLAB\$YfU8fUSUfJfMfVf3QfKfKfJGLUER^MY86fUfMqN\$fOAB@AOJ^UK^S6X\$W\$~JfF&F7fDf1Wf)0NfJGf1DDV^Rf(1%4 M^OR0\$4W^ @f\$Df1>=A47G4A7K9+{79OKZf1fUGf1UZV2^UV:Z^DfJ7-9U? 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RfFQQfRfE67R)58U5:KULfJfKLWUf)(-4NZSK- ^3X^6A>DEfA^#>6A MZTfPVO ^Y%>3:K2f4R ^P>A^fE^C5">O6R7VNS?7TAU2fKfCKULfJfKLW MUf)(-4NZSfJfW4R ^P>A^fE^4R ^P>A^fE^C5">O6R7VNS?7TAU2fKfB^Z^2 MK6XWfYfW? 6UK^fJfV^5^M^UO^fV-7f\$9fH^%N^P^JfLWf%N^%K7Q>fJf%K6M^0Kf):7 MOf4fLZ^YDR^N-9 KYf^C&fXEAfZOB6RVZD^B-8W5f4Bf2C^fFHU80M9f MGf):6H9)\$fK7L>\*M^V\$^D93(O^f0:6^AE^+X@G4^QfR)\$fQ@=F^GQ0NPQ^f7Mv^fUV^3f>L^VERPSC^&H6(M,2X@Af7f1 Q:G05.S^9WfJfPfLM^M^P^XNfRfNCfDfH6O^CE\$C>#BfJ EDND^B MZRBGR^QG^M^9E8^1;W&fJfW^QO<KWfJfJ4^Zf)2f1fJ2 Mf5+NLZ.O6R7VNS?7TAU2fKfKXf)f\$1-SE(TYf0:VfL(TXf1118>-?@G^N\$N M^BW&-3? 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```

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MGMQ>ZfH M>F$4Sf:GOX@K23S(>M^M^PJK@53 -)2Qf6DGF0f:?:7A57^HT: *MP:62X%AZ^2K)V4) =X^C^fLJVf12V82E$3;
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[illegible]







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```



[illegible]



MSV>BJ>70IGBZ-YDDD.\*\$8<@CS4Z-T\*H\*HJ.4F.L@E]]I73H&E.GHZ4TZ5^M.GLK<-N^KC.MQ)4NH>-WBGSA-PQ72YO\3MEL"P" (7->RX.Q8NGHUAU.5J-"A\J\GUF:AUM ML\IE 3LCG####\$FDP PPP####",,,"I\Z4T ^(&OH V-U WI^+377^\$7&K:L M^D^TLEN\%%@%ZRBMA: (JYU:P3HYJ5YJB/@7Q."ZNM)28&F-X">QVLJA M4GJS&TIS 6(HOHL (L2EYFV9XHS /12E/OG^NOOKLE R^N^7H MB#^T7^G Y^T^ ROUEE.F4M2@:% (P%)#DA^PGN^Z^D^B^FF5EU.:2S@<^CRZF^M@<^M^V^V^G^Q^O^JVG^N^A S^N^Q8W^Y^<^3K37T75J^NE>F=^4K00.^)>@@UHH(4 M#6E.4QZEL^X4XW0A^&E&F T(OA^9QCA)<^M^Q^M^B^S^P^L^M^Q^I^T^T^YHK M^2:9875294^I8580A^8QC="S(OID(OA@K^2)XN9C2O^H.VVRH^H7Y^\* /9N MH974RE?PVIZUK2M^JTW.^4H&FV@JUK7R>3F8 7U:3]W-P YW8J6YFI!W1D M1.YUZ+R%B1N+PKIV0IMY)ACA^)=U& (8J4#2I@J WGI&E^\*.Q4\$!>X5.;H0^#K6N@^TVG.M5F!>H^OYM3SK1M-JWRN(X5F7U^7R@+^ETI6HAAIEX6TH8\$0IEAH>=>VH@A MH96A@^1J&M1^TIN#>#7DI^LRXNH.^6SKUK3IEX7^EE=\*^MO^BKT^K.^K3 MTTK^C^4WR)1B^KIG.RXW^DI^RXM M-M^9UIK7 W>^"NQOZ? TWZ)5I=-ICUUI^LLK^9I8G=XEC^R^M2&RJ.&(6( MUE#>2I&4^2(JR+^M:6IW2^5A(8FA0J79E15.^6B4O^U^JERRZM&7^2 M&LTOFDQ3R!)^2 3^4S.4ZT5.MJN^XOQC^9EZ.^WMBK3^WAPIK>GJ-MWQ25 P^W^C^A6939 F^EU.\$\$.^\*.%EWG(C^P^S48J^O.^9%P^2NM^AH&@J M^#2E M.4JS^BQ2^>#D^N82N^ALR2R)^LBRE.4H^OYM3SK1M-JWS/-(5F8K36E^!>G7R M=WTF.:KNJF/&.%9EZB! P^4!>4&T5=XOY>%NAFXL5^@%K>T0J:5\$ VTRH! MAI2M=@A!F^\*Q\$F10: (0->YNGTGB\$78XP0\9X%3RZ%.:8G:0.#H>6^HDQ1J24GH.0^"2B0E@#4^Z622 W5\$SWEK!<^L0YDN95\$&Z^%LC4E9#6Y MF5.2QY;#HS# OS6MQZ4^>3.^"1F934A0U2^J4L@O J>=>JM6^JW^7T(5F7KKMOW;2O6O M+O^ATZ^C^F^X^M^>^PO.O33=?RV=-:Z? <CPX4UK3SMZ^OC12M^7F16QO5QI^P M- 8ILL\$G&(M.GD4J2KTGUZ^\$P0.E=-1.8UAIV>D^\*^X.IY.8I4Z^\*OOS MLN.4JTVE^#%OU8JORFA^9RELNB#87^!Y.4LAZXI^O<2^HS\$+@RFJ3P^42 M)75^95&K6I^0N9:U+G J>=>KM6^X^7KRIH3 MF8H>W>+>C^"S^L^R^K:K.^KZ^C^%0%0^I4^>5KHS^ZT^MI2E^\*^NL)S.M^>T^J^T^H^H(N^<M^>S^J^@.JC^%8^0R^0\$QDT@%(6U.VB.W4EJ2H\$!2=4 MF&^4^4MN3E^SE(O^TIR^"6I")=9Q("=5X^Z^6Y^TNE.^!<^\$!^U>K^CD^!P M2=JE4%")9J^RLW93U^MR^J>=> KM6^8T!^RU^BUS^VU.WCW^W9>%N@^#H&@^P.;VAUJ2M^U(6X5 M^CKYU::4WWDYF/U^VT=W^%1L^+J84.O=4^1T; MNHNO JAWT^2@U^"8773-K0(P&KTH.^@ZTYIG^ZTFCYH^FUM^M^UVK^2^WA@M^WVDJ^F^+9^I4^+1IEU65^H3UJ^2M^V^J1.@KJH^T^14 UJ.HI^WDYMF^U^JVT=WC<^<P9JYFH^30\$@+9VI&C^J^D)PQMC(E0)P MT9IHPQNI2DLF^D#^EM.^JE^4PR^>9^>AU^("M.^I01Z^?K6O3W 7ARLW93 MU^R^J>=>JM7N YO^%9EZB^TO^VVM^M^\*^@^@IRIKM#^2Q4H6+G@^A4VB M\$SVFRH15J M^@J(O+^JY9C)^25M^W^W# G=C^CQD@B^I^Y^G:<+ ^B2X^K6)^4SH^4^G#(9UQ)^D^P^LXQ>^87G>V^LFBUS9^3X^+D0RI M5(UISXMI^X^+UK8SMZP0E9Z4 JK-/A9%0.YM1^7K5A@^%E#^)+> JM6^JW^6.10K.Q2E=U+^+Z>GR>%)^T13K6)^VFNM^413XZ)^8 M^>^>S^4^\$X^K:FB^\$1(L^R^K1B)^\$1#^%LO^%\$!"KYU0A^%\$^BKM#0.E#>2 M-67ANQ@LH^\*^\*K8V^+F^Y^V3T4>SNKL E(N^HYE0^"X K9B%49E0ZY^UE^\*@+K0 MHRJ@>2 +^TI46HZAKJ.0M:5K5DZ[5O4]UKBQH08^25Y^MP:5UHH\$+6WQ^X^<M3M1^3DZI^6^>20E044(MD!Z^V^>(7SJBK^>129UJW^BATTR)LSKEI ffa-T9XVN4QEJ9@>@;\$\$T>28 M1%\$^J(>6O-9Y^J)^+2E.X^+/@U2N=Z+U:VTF.@3ICYQR&J^2^A4 M2I0 U M# W^7J^GIPIDU?VFT3? ^JQ1K<9.W&T4TLMKU65F M#(WMJGT(HGDT860I M^W B4(WI2^D5V^U0P4Q)191AZ@>10^\*^#^/J(P5:3L^65%N^J)(UM^5H^J4I6^, M5N1GM.D^J^>08PS&IE+8@^\$S.BER<^1N5N^O4U^H^>+J M.SLZ^UJM2>K6.^TXN3O^\$.K6GUVU#2^M^%NQ)A2^:V A^N^NP5X&^)^#G)T M^J:Z5A(Y^Z)QFDSJ&MCXD^F8M.^24Z49CFE0J5H0P)0DUYD MV^R^K^H8(E2V35DR&^Y8%+^"PL)^0BBB15^6B2E)^2G^%Z8J^N4+ MBSIGY02^N9\$;NU+55GZ&^BJ4^PVE^EK4[H]^1SFU/M^8UVK?^9 M^29JHDEI^F^U4ZME^OZD7L^Q9J2XDI?KHV5^J.ECL&M4<1M87^S^5^F MU(TU5M+0M2+?)^R^Q6F4@^%>^>CM81F7^6HZWZMF\$5^2R^U!>S7^>A&^Z MX 3KB^8^+2UVY^M^>A^J^262FJER>NUB^J^%M^J>P>G^>)W\$>^F08^KTXV9^ZX M@O88(2E&J4 A25Q1^"H2N0&J\$M^>T5^\*N5F^>IH^1WFU^K[5:M^J^Q)XO@P MPO.Q2H@US^VYJ(PP5^\*R^KO.^6NZA0:O^4)5.@BU^MK2HA5UI6QI%."R MX@B^"5LZA&H^H4KEW7UH(HJ5H<5O-6@J^16M^AK2MI4KH773^P^N4J)M6?^ZNI^NCPX\$4^6F MJ)OAF6B(0H>U^H^N^82M^B^T^1G^3N>M^COISC^YX^25R0Y^:(DID99Q^H2 MSA5^\*^>490(RQA\$&@J5F^>IH^1SFU/M^8UVK? >LV7^\*XL>=DSXPSK+PS MNJ.H3\$^BTY169M^7HGI^EG\$&G(W!!=A.N(4E!^\$C\$6HIN+K4L@.33^\*9^>AG; MQ^ONVCGINZ^Y^W^XKRQ^CG^%V)P^%W7N^X^+8.9ML+^YI9<5N@^\$K321K3M^P MJS (ZA9RDQ3>R(&P^\$K> >WKS0+Q4QY^W8E2FE.OI^%7K^\*^M?^O3^S^NE9^MNRGJ^D^YMSK1M5J^W^N^XOBK6U6BNLLN^JS<^!<8E".IEQC6:\$(2^\*1^3D^HAYP)^#0^< "PT^BRL^E^4J&E&T^T^F^>C^M^H^>A^\$LL(L^8OC=>+^\$&^&L E(H^T^65D97^>>I^D2R7QFJ333= M8^26%UJ^V^LOO^>5^###^>PPUJ3TUQOK3VT^J].ISACCGMIH(Z8:TJM^M23^F&M^3WTP^&=>VGOIAK3VT^J].ISACC6GMH(Z8:TJM^23 M^F&M^3WTP^&=>VGOIAK3VT^J].ISACC6GMH(Z8:TJM^23< MX8XUI^>^F&M^3WTP^&=>VGOIAK3VT^J].ISACC6GMH(Z8:TJM^? 3^F&M^3WTP^&=>VGOIAK3VT^J].ISACCGMIH(Z8:TJM^23^F&M^3WTP^&=>VGOIAK3VT^J].ISACCGMIH(Z8:TJM^2 3^F&M^3WTP^&=>VGOIAK3VT^J].ISACC6GMH(Z8:TJM^23^M^F&M^3WTP^&=>VGOIAK3VT^J].ISACC6GMH(Z8:TJM^23^F M^M^3WTP^&=>VGOIAK3VT^J].ISACC6GMH(Z8:TJM^23^F=M:5J%<PPPP#####^>KJ(1^\*XEVX+JQK^9JZ^O9Y2W25>Y9K^NUP8Y^H^%\* MYS^Q0VY^T^HR2P3^UZ.BLUAM^54UA^F5ZK7>NH40C^GD\$ECL@NCG6GJN5^F6-I3^8F7-609)2TQ9V1D?2D>^>X8#7 MA7^ FVIZ>U1S5-0=D^THX>5G.^S^R^J>=>U=S2^8UHE^DXKU5D<@A29\$@M0\$%Q6H^%E1VED)DQ)IYPZ1^%EB^7I3&2^Z93HG? R2M\$HD^UAT4^5^5\$61@M^+^YKYK6+G^O^I^P5N^2W^6OF4^97^1J9K&F^J^N^J^T^I^W^E^G^JGNB1.4^NDK



=/(&&D3"X+^DMJ)&\*N9PEHIIW M""(&)I&:4A+ ,3C2-  
34F1+ B.Q>59.O<1/2"PI#D[3%NC@3H2ZE3>%W( C1L%GO:%1R%0ID,>2G)V.)&0TIUBB.O)\*. &MOYV+4C/D5M  
MG.YI+ P4CFPNBUGEUQ%CT6D<6UF1L\* @+SI- T6L\$MBC3\*DS?0P4HE%NHO!XX M+ + -1/\*K@BNU'J9+()#8O)XQ!):1?5\*LI+  
(4Q\*TDG\*8W(29\$=D M!IG=RW+ Rf%:3=8A69B+ ARVU%O&=YATQ8W7/<:1&K? (A.V%v8T.M; YC.F; M!0=V(GJ1@~3/72-  
PXLPUJES>1N.L\* &9+ +0\$2(1/AD)B\$MBJ)U;-758FN#P M&40RQRJ16JB XH>12V0V.C^9A RI(HW;-|PJJW+ FEMW+VS\$Y4A<&3H8.F'S#  
M,4>V6Y4\$3M^W0: 4MOX.F9D)XBH&+I  
MDQR7(AZ.C5D5\$MS.Q/3.PQ2QL285.P^N3O(Y\$M#95% @<<IME6UYO&D.9(OF1JP1)OTMU.EI.3Q5;"Kf41"UG"4V\*  
M\*MKDL:VDPD@(@IK"K%(@TME;1\*G#<2&D\$8M7;2\*W'L75VA.7MTRVV\$NY(Q.M1.PBTN\* J.DT#&<M17 &O^5f+12W=(\$G;+).B'FH'?3M-  
EL#/@G?Y&f|VYK26W7,f/> \$Q.BVM M(BP1T3>C7)FU;;H@3DS561LU4C&J^')PV@W458V/M5<6151F/DSI'"5< 1R31AIK M7.5QIY+ )Q%65J@<FQ\*  
f|V&9 GfZPQU2BD"?L^4VTE5H+6%-5+ @2)KCH66C16.1EP>6JC5.RDA.6JP&GO@EN^L4A MJ^TX^T0ROF%QIF.H^9%WV;6NF+SI(@ZVQ679FA+11JM  
ML;)/4#JVN:1%)Q)%V971#(9ZFBL?6f0ZDCQE.RISN V\$MC=S.U9NX+L7#< MS<3);SfB6CRYZ4YDGANH3% M@^4-  
Df3H@+ ,3%)HA82MLKU1&T45S^MA+ ^9YJDRRJ2WMCSPRA9J.J+ =8)HW9+ =Z6ISP9E#&ZQ(UY0 M2%E4+2  
OHUFWM+ KJ#M0Q)GBQ: .632WK? .\*6QG0:3.5Qf<)G)7/8^T70JR > @ MLE\$5^QOZ5Q3 `@4VG/4.DT;71?)HX|M""5- GYE^W?<br>3069/##HGH\*HCE 9KU3\*\*Q9Z2N.5.QARLJ.RDRB% MIBU8W;\*U9JN+33RJ.19G:(#&)HUPI&6A^GKU^XJ0/P6349UK#HY- P=:(2E(WQ= <br>MfE<3D%TE4^F)-D6f;6ZBCM-IW#&fXfCfR\$3 \$HfPOJMHfTYE.R%T9Z;)C>\*MS)M5QXK&SAVE^5B4HPEDY> <br>fAVT:48f3K\$5+ E6=N;"7\*01\*)EQV.U%O^AQUG M?8TE= :1+9O)&1JD< @^2EUM^4Z-SC<%0%V)R.E^NOCG|^NQG%U+7Y^f0(LK M%OXK? <br>f-36TC2^V127% =#V&K^A1.f(VOB9?S6?>P5V#8- &f>V^CR-A 1C;fL6V^CMR(= < M6X@9BWT0%\*.O-PKOG6)AK (44R^8Q\$HPC9J\* <br>(Z.EK4KUJ)3@NO-NT(RfPZZ\$L MLJD47)N!=-.\$S=:V106UEf+ @7#>TDF6VTf(O< \*G^F50DL2QT^OWPFT;.\$^Y8GA1&%(+)f; <br>(89(Bf5A7729;97f6VJ@fC>U(PK; M6L RHf|fY3;^02=^8P 4SR0: 7#J26."GX8Ff^1K =4/R4Y)"9+ f/> M2:V^U@Hf|N"5SJW+ \*LNS<55;\* <br><6YD%P)Xf1ZY28JQ<^VDW4N9C8C"H0)K MYRLNUN.LMXYE^9W L@Tf+5&Nf)EN6^W0 M7L U\$Z; <br>fG:1?;>f7fB%f(%)f:Q+8#;Uf0D2fJfWSS\$%KZ4> SA9T?:590Q6Q. MNTW7&8^T)P4:QfM(P.XK <:7,f|&+f26%AN.SC^6%Q^\$XVP=P))"4;< <br>M^W:MB87QSOUAS24 N63MVA420Q^ABDN+ \* "RV2\*Wf.X 3+0VP^PZ\*WAZN? M+ \$7#BMXYJC<:fZf+; <br>fJ6LG%BVAfJ8GLM>IM>R5X&9Z;\*M"9R2OX7:>T8RfQ.MG:H^F2W< (<G>S:2.1.G&S4+;+<\$6.4fLJ3UNFOFRMK+;\$53)##(EARD0f <br>M+;fLQO/R&M.9VL3F.@f8.O>5T;KB)S\$&^\*EC7.X3% M^Y <0UX^HN^Q59^V fGL13H(@U&fZYT#;IAC^E1Y: E160^ENWGVDPfJ <br>M+7H^R^TMV^TF^SOAC^E1Y: E160^ENWGVDPfJ+7H^R^TMV^TF^SOA MC^E1Y: E160^ENWGVDPfJ+7H^R^TMV^TF^SOA f3T?>?C^E1Y: E160 <br>M^ENWGVDPfJ+7H^R^TMV^TF^SMI3V4fY&E^93W8P3Y4>6OY05Df;MYf|, M^\*CRU \*""LAf+ =O/M)@;f:4fE=Al3T:4T^;f&^? <br>\*CRU \*""LAf+ =O/M)AY4> M6OY05Df;MYf|,IG23^E^93W8P3Y4>6OY05Df;MYf|,M^\*CRU \*""LAf+ =O/MM)@; <br>f:4fE=Al3V4fY;\$^5EK^4%9#Z6f>?>3#RHfM?R@K(?2W;Sf28#VEfM93W8:4fE)9J/f7H^R^TMV^TF^E1Y: E160^ENWGVDP&=M^>RGNIAl3V8 <br>MP3Y4>6OY05Df;MYf|,M^\*CRU \*""LAf+ =O/M)@;f:4#2GHfZf| P#MK WTZ>C# M2GLfCfE1Y: E160^ENWGVDPfJ+7H^R^TMV^TF^SM0 \*5UTfGM^+T? <br>Zf M7fXYQ@GRHfM?R@K(?2W;Sf28>5^EK^4%9#Z6f>?>3>9WTQ@GRHfM?R@K(?2W <br>M;Sf28>5^EK^4%9#Z6f>?>3>9S.)&^TQ ^XUQ=GU OKVC? %C=VA^M(O+;BTQN:++7Q&?^4#9#f/ ^ <br>K=O^X: ^DQ43LWGYCDf|VAK &GHHD3 M\$Yf|HO ^LYM>F%S0O#2O)+LCER3F&(G)N4HU("U)QfE23A19Q1A0f)A8PT#9 <br>MMAAA@&&&&8888^XfX%MK>78C2F&W0@D.N.\$5JA&K61>Q5Af4<5JfX^f1fM4L4C0.36>Hf\* @(@4)#C4fHS\$QX^G\$^+.106\* ^O- <br>D;^fKE1 =RLWfBf6VQAV^% MVR+^PQ^E4=) \*G4S>W<..1 )A8%\*.\$fJfK # AH97"J5K\$S+5WHY\*4#;C6.2 Mx1/5^B3U;.J86&\* (&R- <br>-(URH NY6:^Q>^D#9& D:Y4?WYAD:D)"N<3.2RLD&C3(T:1\*Z%G^NA)AC742@W.MfHfTB8A8D)@D(W^WQS&4@^C^\$.Df1N^+@0F>S%^A>6f Mf(- <br>fPYf|)^%PD;NSMBYK5K ^J0-D;^fKE1 =RLWfBf8/^NT8&R/^)"78.f3B4F/^QZ)"SHAKB53^TK MG%I2\*"ABH%HKH=7fU&8^BfBB1"&7.BfA\$M2- <br>2G-PS<0MG+^YfKM";KIR85 M^8O)10G@RQ:F4fY3f)XH24#4<^JfJfU:ASfYf|fBfJ%IDZ.Y)4^3FM8F)#P M>0 D;^fKE1 =RLWfBfV(&R- <br>-(URH NY6:^Q>^EX=CKMS 7V\$1UO@5Y4+A.9" MPQfLX6@)Z9&UDA;7f6E4O9R=C52f@2NW MME&=2^Df44S+@- <br>ZEC\$4 N;?JAMfX+G4.EfBX)"D#9& D:Y4?W^D#9& D:Y4?W0 D;^fKE1 =RLWfBf6VPP%2?(&R- (URH NY6:^Q>^D#9& D:Y4 M?W0- <br>D;^fKE1 =RLWfBf6VPP%2?(&R- (URH NY6:^Q>^D# M9& D:Y4?W0 D;^fKE1 =RLWfBf6VPP%2?(&R- (URH NY6 M;^Q>^D#9& D:Y4?W0 <br>D;^fKE1 =RLWfBf6VPP%2?(&R- (MURH NY6:^Q>^D#9& D:Y4?W0 D;^fKE1 =RLWfBf6VPP%2 M?(&R- (URH NY6:^Q>^D#9& D:Y4?W0 <br>D;^fKE1 =RLWfB M6VPP%22(&R- (URH NY6:^Q>^D#9& D:Y4?W1"/0F/4f0LP^X^A4GC93.H6 M<#J. <br>fN9R50>L^2868W)"EJ"JQ6^".JU.\$VfHf94QC^XEM(K=%M96B7HfUf8QR MR 3.-C^4C3DGO\$3<\*.Cf1=0O0:A^4N"6>>DW@fH4fL^T52>0LP\*>N+IVB9C8 <br>M,\*&Y=TBQS2Mf)%+A1?CDT5/3M^PMVf9\$RfM"Wf)XfK4H;^CXH3G)X^G>Gf M:SD.OP5%^N&\*19f)QJG^OT(L66YDV^;B.2Y\$LDHX.? <br>3Y^4RZ-VL@f^fM)8^7FU&BCQ;<95%&WBGF2fH55S5E0fU2D(34;4N<9R2V^fCf+AAD=8L M3>G \$fHEWfLE.2%<Y^E=U<%SDQ(E^4WP44F;5 <br>MZ^2O"\*H7=4)PEfY^CX1(P53Y?D P7f|VD<.;RDIM<5^&HfB=82)H(5HQ)EQC&@9ORK1^W9H;@N#GfO3LYK?F#%1 M7>K.NH^2HCS# <br>(f ""f%RH^<#4ZE\$^353C=7^QR4)fJ2ZfF\$EMO(G^M^5RO M+P>NGNG9TVD<5W?4fR.Q+^O3MB164P7B>6H3@F.RW0f^5OQZ\$)2A.G)< M- <br>N5+C6XEX4">D:5.Z.E@)A>NT8;CFQP296RGfP2W-f50W.f4NQX4A^14 MZO\*fO5^R&LfQf9Q8^H2IRO@fXfJ7%O\$XB2- <br>\*5TNS;M3.%(+CfJfYC4QLT; M2^REOC")PCf+Q0.fJ5952D8E@fX8ZfDY:Lf1B@BE:fE&G\*=H5)N)DV6^#)+U- <br>MAV3.Df(EW>B#J(B#8f0P43fHN=\$4Z+N)\$>+5U+^SfUA2A95P.f|.(2A+=G%>0 MPfXfKfLC3f2E/9@/S0 \*2 <br>&\*OSB%7^6V fBQ^L;`PPPP#####``,`PPPP## M##`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP#####` <br>M`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`MPPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP <br>M#####`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP#####`M`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP#####` <br>M`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PP MPP#####`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP## <br>M##`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`PPPP#####`,`3`,`PPPP#####`,`PPPP` V3)`end



EXHIBIT 14.1

EMCORE CORPORATION CODE OF ETHICS FOR FINANCIAL PROFESSIONALS

This EMCORE CORPORATION Code of Ethics for Financial Professionals applies to the Chief Executive Officer, Chief Financial Officer, Vice Presidents of Finance, Controllers and Assistant Controllers. EMCORE expects all of its employees to act in accordance with the highest standards of personal and professional integrity, in all aspects of their activities, to comply with all applicable laws, rules and regulations, to deter wrongdoing and abide by all other applicable EMCORE policies and guidelines in the employee handbook relating to the areas covered by this Code. This Code of Ethics is intended to supplement the policies and standards of conduct contained in the EMCORE employee handbook.

You agree to:

- (a) Engage in and promote honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
- (b) Avoid conflicts of interest and to disclose to the General Counsel and Audit Committee any material transaction or relationship that reasonably could be expected to give rise to such a conflict;
- (c) Take all reasonable measures to protect the confidentiality of non-public information about EMCORE or its subsidiaries and their customers obtained or created in connection with your activities and to prevent the unauthorized disclosure of such information unless required by applicable law or regulation or legal or regulatory process;
- (d) Produce full, fair, accurate, timely, and understandable disclosure in reports and documents that EMCORE files with, or submits to, the Securities and Exchange Commission and other regulators and in other public communications made by EMCORE;
- (e) Comply with all applicable governmental laws, rules and regulations; and
- (f) Promptly report any possible violation of this Code of Ethics to the General Counsel and Audit Committee.

You are prohibited from directly or indirectly taking any action to fraudulently influence, coerce, manipulate or mislead EMCORE's independent public auditors for the purpose of rendering the financial statements of EMCORE misleading.

You understand that you will be held accountable for your adherence to this Code of Ethics. Your failure to observe the terms of this Code of Ethics may result in disciplinary action, up to and including termination of employment.

If you have any questions regarding the best course of action in a particular situation, you should promptly contact the General Counsel or the Audit Committee.

Violations of this Code of Ethics may also constitute violations of law and may result in civil and criminal penalties for you, your supervisors and/or EMCORE.

Financial Professionals should report observed violations of the Code and illegal or unethical behavior to EMCORE's General Counsel and Audit Committee or to the Ethics and Compliance hotline. All reports will be treated in a confidential manner and it is EMCORE's policy to not allow retaliation for reports made in good faith of misconduct by others. You may choose to remain anonymous in reporting any possible violation of this Code of Ethics. EMCORE's General Counsel will lead all investigations of alleged violations or misconduct. Employees are expected to cooperate in internal investigations of misconduct and violations of this Code.

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Exhibit 21.1

SUBSIDIARIES OF THE REGISTRANT

MicroOptical Devices, Inc., a Delaware corporation

EMCORE IRB Company, Inc., a New Mexico corporation

EMCORE Real Estate Holding Corporation, a Delaware corporation

TPS Acquisition Corporation, a Delaware corporation

TPS Financing Corporation, a Delaware corporation

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Exhibit 23.1

INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in the Registration Statement Nos. 333-27507, 333-37306, 333-36445, 333-39547, 333-60816 and 333-45827 of EMCORE Corporation on Form S-8 and Registration Statement Nos. 333-04911, 333-87752, 333-65526, 333-71791 and 333-42514 of EMCORE Corporation on Form S-3 of our report dated December 24, 2003 (which report expresses an unqualified opinion and includes an explanatory paragraph referring to accounting changes), appearing in this Annual Report on Form 10-K of EMCORE Corporation for the year ended September 30, 2003.

DELOITTE & TOUCHE L.L.P.

Parsippany, New Jersey December 24, 2003

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CERTIFICATION

I, Reuben F. Richards, Jr., certify that:

- 1- I have reviewed this annual report on Form 10-K of EMCORE Corporation;
- 2- Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 2- Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4- The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - a)- designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b)- Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - c)- Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5- The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a)- all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b)- any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting;

Date: December 24, 2003

/s/ Reuben F. Richards, Jr.

Reuben F. Richards, Jr. President and CEO

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CERTIFICATION

I, Thomas G. Werthan, certify that:

- 1- I have reviewed this annual report on Form 10-K of EMCORE Corporation;
- 2- Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 2- Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4- The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - a)- designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b)- Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - c)- Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5- The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a)- all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b)- any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting;

Date: December 24, 2003

/s/ Thomas G. Werthan

Thomas G. Werthan Chief Financial Officer

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STATEMENT REQUIRED BY 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of EMCORE Corporation (the "Company") for the year ended September 30, 2002, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Reuben F. Richards, Jr., President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that: 1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and 2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Reuben F. Richards, Jr. December 24, 2002/s/ Reuben F. Richards, Jr.

A signed original of this written statement required by Section 906 has been provided to EMCORE Corporation and will be retained by EMCORE Corporation and furnished to the Securities and Exchange Commission or its staff upon request. This certification has not been and shall not be deemed to be filed with the Securities and Exchange Commission.

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STATEMENT REQUIRED BY 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of EMCORE Corporation (the "Company") for the year ended September 30, 2003, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Thomas G. Werthan, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that: 1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and 2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company;

Thomas G. Werthan December 24, 2003 /s/ Thomas G. Werthan

A signed original of this written statement required by Section 906 has been provided to EMCORE Corporation and will be retained by EMCORE Corporation and furnished to the Securities and Exchange Commission or its staff upon request. This certification has not been and shall not be deemed to be filed with the Securities and Exchange Commission.

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